

The National Locksmith®

\$5.00

CODES
METAL ROUSSEAU
E0001 - E5000, PART 3
page 119

April 1996
Volume 67, No. 4

MIRACLE FINISHES...

**WILL THEY SURVIVE
OUR CHAMBER OF
HORRORS?**

SEE PAGE 54

PLUS THIS MONTH...

1995 KIA SPORTAGE 4X4

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MANUFACTURER TRAINING SEMINARS

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TEST DRIVE



On The Cover

The manufacturers claim their new finishes would not tarnish, pit, flake, corrode, or discolor for a lifetime. That's a claim that can't go unchallenged, so *The National Locksmith* opened its testing laboratory once again and invoked a menacing barrage of tests to see just how long it would take before these products cried Uncle.

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Commentary

Driving through Chicago recently, I passed a Home Depot megastore. Nailed to the building was a sheet of plywood, spray painted with the following words: "Now hiring locksmiths." No lie.

I called this store and a spokesman there told me the following. They have already hired some locksmiths and are seeking more. I asked how many more would be hired, and his response was, "We'll have plenty."

Offered in-store only, at this point, are a fairly wide range of locksmith services. According to the spokesman, this is only the second Home Depot in the country participating in what he termed a "rollout" of locksmith service center in Home Depot. I assume if successful in Chicago it will spread. Although services are only being offered in the store at this point, you never know when they might try the next step of putting trucks on the street.

You may have noticed the upgraded look and feel of our covers this month. With this issue, we have switched printers, and are now being printed by R.R. Donnelley who is able to UV coat our covers. I hope you like the new look.

The production team and I recently had a lunch meeting at the Donnelley plant. Present was their entire executive staff. My guys and I were way outnumbered. (Plus some of the Donnelley people even had ties!)

As I was slicing a few crumbs off a fudge brownie, the plate slipped at the same moment my knife descended into the thick, gooey frosting. Needless to say, the plate flew up into the air, brownies raining down in all directions, naturally most of them landing frosting side down on Donnelley's brand new carpet. Amid gales of laughter, I was trying my best to pick the damned things up as quickly as possible when I noticed that my left boot was grinding one into the carpet. Let's just say that cleaning the chocolate frosting off my boot with a white linen napkin was not a pretty sight. My apologies to Faye, the cleaning lady at Donnelley!

If you have access to the Worldwide Web on the Internet, you can find a lot of interesting locksmith related Web pages. To find them, go to the Web Crawler at <http://webcrawler.com/>. This is a search function that allows you to look at Web pages by a key word or words. Just type in locksmith and push search. You'll be amazed at the nearly 100 pages to view, many by organizations you know, and some you never heard of. See you on the Web!

Join our free E-mail list!

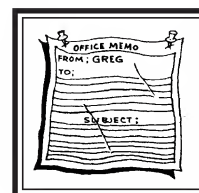
Receive locksmith info by E-Mail.
Write us at: NATLLOCK@aol.com

Marc Goldberg



Marc Goldberg
Editor/Publisher

**Home Depot
Hires
Locksmiths
...&...
You can dress
Marc up
but you
can't
take him
out!**



Mango's Message



Greg Mango
Managing Editor

The Wonder Pick

WOW! What a great pick! Imagine, a pick that can not only pick standard pin tumbler locks, but a particular brand of high security locks as well. Over a year ago, Custom Security Products Inc., began heavy promotion for its new "Patent Pending" state of the art "Tri-Axial" electronic pick, (Suggested retail price of \$250.00 ea., unless you want the high security pick attachments, then it's \$499.95 ea.) This pick incorporates features never before available in an electronic pick.

After first hearing about, and receiving a faxed flier on the Tri-Axial pick, I contacted Donald Hughes, of Custom Security Products Inc., to inquire about this device. He naturally went into a lengthy description as to the effectiveness and special features incorporated into the Tri-Axial pick.

According to Hughes, the unit utilizes a double action picking motion which not only lifts the pins, but also causes a twisting motion on the pins as well. This is accomplished by emulating the horizontal slicing action of a dual blade electric knife (You know, the type your parents use to carve the Thanksgiving turkey) in conjunction with the vertical action of a typical rake pick. The Tri-Axial pick is basically a marriage of the two designs. The dual blade slicing motion is said to pick a certain high security lock by twisting the bottom pins into position to catch the side-bar, then lifting the pin to the secondary shear line.

I must admit, this is quite a novel and intriguing idea. The theory sounded logical, so I asked Hughes to send me a sample of his product for review. There was one minor encumbrance preventing him from doing that however; he didn't have any. At the time of our conversation, Hughes said that all he currently had in his possession was a prototype model of the Tri-Axial. The actual device was not yet in production. Hughes said he was waiting for an order of precision machined gears supplied by Boston Gear Company, as well as Swiss made micro-motors, to arrive so he could begin production.

Our conversation ended with Hughes assuring me that he would supply me with a sample product to evaluate as soon as he had it in stock. According to Hughes, the projected shipping date was approximately 90-days from the time of our conversation. Meanwhile, Custom Security Products Inc., was aggressively marketing the Tri-Axial pick while accepting full as well as partial payments on a product that was not currently in stock. There also seemed to be some confusion on exactly what to call this new product. In earlier promotional flyers, it was called the Tri-Axial. In later brochures it was referred to as the "Tri-Axes." By now, Custom Security Products Inc., has settled on a confirmed name; Tri-Axes.

I called the Custom Security Products 800-number roughly 30-days after our initial conversation. When I did, this is what I heard: *"We're sorry, you have reached a number that has been disconnected or is no longer in service. If you feel you have reached this recording in error, please check the number and try your call again."*

Things weren't looking good.

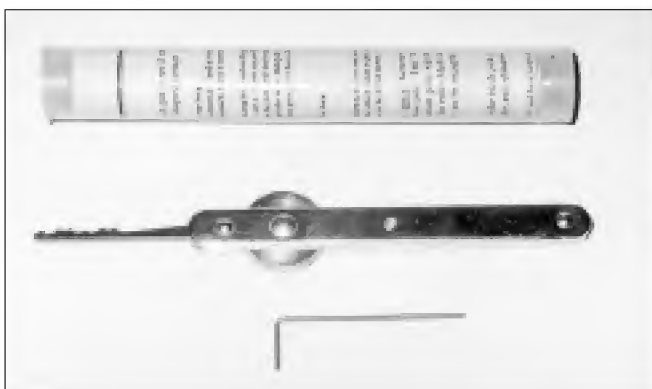
A phone number for Custom Security Products was soon reinstated, but it was no longer toll free. Now every time someone called to inquire about the delivery - or status - of their pre-paid product, it was going to cost them.

Meanwhile, Custom Security Products Inc., developed and began marketing yet another new pick design, the "Roller Blade Pick." This is basically a mechanical version of the Tri - Axes concept in a more traditional pick form. I received a set of the Roller Blade Picks from Ron Ashley, owner of Ashley's Locksmith, Ron had also ordered the Tri-Axes pick which still had not arrived - after waiting for almost a year.

Continued on page 8

Continued from page 6

The Roller Blade Pick is available in four different versions: Single and double picking blades, and single and double picking blades with deluxe handles. Prices range from \$49.00 to \$69.00 ea. (See photograph 1)



1. The "Roller Blade Pick"

The theory is: by rolling the knurled thumb wheel forward, backwards or back and forth, the pick blade(s), will move in and out, lifting - and twisting - the pins automatically. For the life of me, I was unable to pick a lock with this device. Now, I'll admit, I'm getting a little old, my hands are arthritic, my eye sight is poor, I'm loosing my hair, my skills are a little rusty and I have a touch of mental illness, HOWEVER, after inserting the pick into the keyway and rolling the thumb wheel, the handle would move back and forth more than the pick blade(s). I would have needed a bionic thumb to get any real action going.

I believe I could have accomplished better results with a simple rake pick and a little in and out motion. But then again, what would a hunchbacked, physically challenged, one eyed, feeble minded individual like myself know?

A few days after receiving the "Roller Blade Picks," I received another call from Ron Ashley.

"Hay Greg, I just received something you'll be interested in."

"What's that Ron?"

"Believe it or not, I received a Tri-Axes," Ron replied.

"I don't believe it. Does it include the high security attachments?" I inquired.

"No," he said.

"Does it work?"

"Well, it will pick something. You've just got to see it for yourself" Ron snickered.

Not one to pass up an opportunity to indulge into the unknown in the hopes of uncovering a hidden treasure - just once I'd like it to happen - I told Ron to send it on over. (See photograph 2)



2. The \$499.00 "Tri-Axes" electronic pick.

At first glance, the pick is much smaller than expected. That's because in the advertisement, it's oversized just a tad. There are three main components to the unit: The Tri-Axes pick; a battery pack which requires one 9-volt battery, and a connecting wire with miniature RCA jack connectors.

Once again, I failed to pick anything with a tool that did have some real bionic action going. Had I attempted any longer, I would have eventually sawed my way through the lock!

Both of these products remind me of a pitcher that can't quite make it to the major leagues. They have great form, but the follow through is lacking.

Well, I know one thing for sure, either these tools didn't live up to their claims, or it's a good thing I'm sitting behind a desk and not a work bench anymore!

P.S. To make matters worse, a couple weeks after receiving the Tri-Axes pick, Ron did receive the ten high security pick attachments he originally ordered and paid for - along with an additional \$205.00 credit card voucher. Custom Security Products Inc., double charged Ron for the high security picks with no authorization to add additional expenses to his credit card. I'm sure this was just an accidental oversight on CSP's part! Besides that, *The National Locksmith* has received 30-40 complaints on Custom Security Products, Inc., via E-Mail, U.S. mail and M o Bell over the last few months

A P R I L 1 9 9 6

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Straighten the Facts

In response to Richard Solomon's, "Certified Locksmith," February 1996 letter, in which the last sentence reads "certified locksmith tale," I would like to say that's exactly what it is, "a tale." I am the person he spoke so negatively about in his letter. The story at the beginning actually happened; he did call me a few choice names as he describes in his letter (I assume because I used to operate a tow service.) When he was finished telling me that I wasn't a locksmith, he walked away without even letting me defend myself from what he said. The rest of his story however, never happened. I was not invited out to open his vehicle, and if I had been, I would have had it opened QUICKLY, no matter how he supposedly had his door purposely rigged. It's true he did ridicule me verbally, but it's not true about him tricking me into making a fool of myself. I am a specialist in unlocking vehicles and although not perfect, I believe that I am one of the best in

this area at what I do. I had opened a towing business and for years unlocking cars was my specialty. I decided to do that full-time as well as replace lost keys for automotive's, so I enrolled in classes and was trained in basic and advanced locksmithing - all aspects of it. I became certified, bonded, licensed and insured. I am an active member of ALOA in good standing and very proud to be a locksmith. I am writing this letter after visiting by phone with the managing editor of this publication to which I am a subscriber, and I am enclosing copies of my credentials for his verification. Thank you.

Paul Brown
Missouri

Editors Note: I did speak with Paul and he did send me certificates from locksmith classes he had taken along with his ALOA membership, bond certificate and business license. Paul was very upset about the false representation of the events as reported, and wanted to verify to me that he was indeed a tow operator at one time but now practices locksmithing full time. There is, unfortunately, a very strong disdain in many locksmiths towards tow truck drivers and operators. We should all be very careful when we spew derogatory statements like Rubbish men and scabs towards any person or profession. As in this case, Rubbish man and scab was directed towards someone who was indeed a locksmith with the credentials to prove it. These references should have been edited out of the letter and I take full responsibility for that oversight. I believe everyone has a right to their opinion, and Letters is a forum to express your views, controversial or not. I strongly encourage your viewpoints no matter



how politically correct or incorrect they may be. De-rogatory statements however, should be omitted, if not by you, then by me.

Greg Mango

Hope For All

This past year has not been a good one for me. The loss of my dad was devastating, but I must keep trudging on guided by the force, that something called HOPE. Hope; that force that keeps a soldier in Bosnia standing guard duty on a cold winter's night. Hope; that force that keeps a trucker guiding his 18-wheeler on some desolate highway 2000 miles from home. Hope; that something which arouses a locksmith at 3 a.m. to help some poor soul locked out of his house or car. As we ring in the New Year, we at BP Lock & Alarm in New Jersey, want to wish everyone a Happy New Year, and Hope. On a personal note, I want to wish Marc and his family a very Prosperous New Year, and may all on the staff of *THE NATIONAL*

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

LOCKSMITH - the best security magazine on this planet - have good health. The very best to Tom Seroogy and to Greg Mango.

Bill Paroby
New Jersey

Licensing Knocks One Down

I have been a locksmith for over 18 years. When I was about to retire as a Police Officer some twenty-one years ago, I knew I would need supplemental income and something to do after I retired. I took some locksmith schooling and began purchasing equipment while working on the side to properly learn the trade. In 1991, I did retire from the Police Department and began locksmithing full time. Nearly all my work is out of my fully equipped van, so I guess you would call me a "mobile locksmith".

I enjoy locksmithing and I enjoy the challenge. Over the years, I've invested the largest portion of my profits back into the business, in the way of equipment and stock. Now, the State of Illinois has enacted a law regulating and licensing locksmiths. I would have no problem with this, except for the fact that this law, from what I understand, does not include tow truck operators or anyone who does not advertise as a locksmith from doing locksmith work (not just opening vehicles, but lock repairs, rekeying etc.) without a license! Further, the license fee, as I understand, is to be \$500.00 the first year, and \$400.00+ each year thereafter!

Folks, this seems to be just something else to run the small business (one man operation) OUT OF BUSINESS! I am at a loss to understand why all the locksmith publications are applauding this law. The thousands of small operators are what keeps YOU in business.

I'm aware that some locksmith associations in the northern part of the state had been lobbying for this law. It's obvious that they lean toward the larger businesses, and that is precisely the reason I have never joined an association. Obviously, this law will discourage individuals from learning the trade and starting their own business. I'm now sorry to say that I'm placing my

mobile lock business up for sale. I will not expend that much of my profits for this license, and I feel that the very purpose of this law is to put me and other small locksmith businesses, out of business. It worked!

Larry Tincher
Illinois

Editors Note: Larry I'm sorry you have succumb to the pressures of recent licensing requirements and have decided to call it quits. Quitting is not the answer. The answer would have been to get involved in the association and make your voice heard - even if its after the fact. I believe there are many within the industry who share your sentiments. On the other hand, had you (and others who share your views) joined the association where you could have expressed your views, maybe the outcome would have been different. Unfortunately, most refuse to get involved, allowing a few (who are willing to get involved) to set the standards and rules for all.

Greg Mango

Glad He's Not A Doctor

I do not normally read the "Letters" section too thoroughly, but I cannot let the unabashed pomposity of Jack ("No Degree for Me," January 1996) go unanswered. Would you send your family to a doctor who last attended a medical seminar in 1981?

Curtis L. Robison
Kansas

A Heart Felt Thanks

Just a note on the very helpful people at Akron Hardware Consultants. I had a customer call me the other day having a problem with a Russwin panic bar with an interchangeable core. After talking with Tim at AHC, he not only took lots of time with me to help me get the right parts I needed, he sent me some books to help me with my installation of the new parts. With the parts I ordered not being a large order and I not being a regular customer (which I will be now) the time and help was very much appreciated. My hat is off to Tim and all the crew at AHC, thanks.

Michael S. Adams
Florida

Sour Grapes

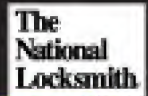
I want to respond to "Jack," who wrote via E-Mail the letter entitled, "No degree for me." You sound like you've eaten a lot of sour grapes Jack. You remind me of something I read in a book about success and goal setting that went something like this: A person who barely makes 20,000 a year is always an expert about why he can't make 50,000 a year. To put it bluntly and painfully, a loser is quick to rationalize his position. Let me tell you a story. Everyone knows that you must pass the BAR exam to practice law and the CPA exam to be a Certified Public Accountant. You also need to pass NASD exams to sell mutual funds and stocks. The BAR associations and NASD are not government entities; they are professional associations that have established rules and qualifications for their members. It so happens that government has decided that these rules and qualifications are the standard by which to regulate those professions, and now everyone who wishes to practice law or sell stocks is required by law to pass those tests.

ALOA is a professional association. With the current and welcome trend towards licensing all across the country, it doesn't take a lot of brains to see that it could soon become a requirement to be a CRL to get a license. In my state for example, you must have 5 years of time on the job before you can get a plumbing or electricians license. If these things ever come to pass Jack, you'll be thanking God you only had to pass a test.

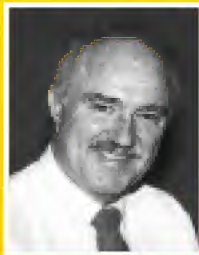
I don't think the PRP is perfect. I'm not happy with the brand sensitive questions that keep popping up. In spite of that complaint, I still think that the PRP is a good thing. I may never install a vault, but having to learn enough about the subject to pass the elective, can only serve to make me more competent in my profession. It is also a barometer of what I know and of what I think I know. Anyone who thinks he has no need to learn anymore is simply foolish. As for the letters after my name, hey, I earned them and I am as proud of them as I was proud to earn the title Marine after Boot Camp.

Tony Wiersielis, CRL
New Jersey





OPENING A BIG 'BROWN' SAFE



by Carl Cloud

At first, I wasn't sure what brand safe it was. The handle was spinning freely on the shaft and both relockers were fired. Things were not looking too good.



1. The "Brown Safe". It stands 74" high, 30" wide and 31" deep. The door is a solid one and one-half inches thick.



2. A magnetic drill rig poised to drill for the top relocker. Masking tape marks the locations of the locking bolts.



It was kind of ironic. I had received a notice that Brown Safe Company was having a sale of miscellaneous tools and equipment on Friday. I didn't think there would be anything of interest for me, but the thought of going to look was still lingering in the back of my mind. Friday morning came and I was still debating the short trip up to San Marcos to the sale, when the phone rang.

"We can't open our safe and our store is due to open within an hour, can you help us?" The only description of the safe the caller could give me was, "It is a big brown safe and the handle goes around and around."

The caller was correct. It was a big brown safe and by the time I arrived the tri-spoked handle had slipped off its shaft. (see photograph 1) It wasn't until later that I realized this was truly a "Brown" safe. The safe was seventy-four inches tall by thirty wide by thirty-one inches deep. The door was a left-hand swing. There was no name listed anywhere other than the S&G in the center of the dial. I didn't recognize the safe and had no idea of the manufacturer.

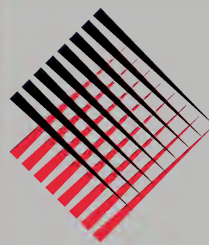
The combination lock would run and the dial stopped at the customary ninety-five. This told me the relock trigger (within the lock case) had not fired. Plus, there was the feel of the lock bolt retracting. The combination lock appeared to be operating properly. I clamped a large pair of vice grips onto the protruding handle shaft. The shaft rotated and the sound of the carriage bar retracting the locking bolts could be heard and felt, but the door wouldn't open! Repeated rotation of the handle shaft to throw and retract the locking bolt were to no avail. Something was not releasing the door.

With the locking bolts retracted, there was a slight amount of outward movement of the door. I slid a business card into the door crack on the opening side. The card would catch and stick in some locations. It was hard to determine if it was hitting a locking bolt or not. Guessing that the carriage bar wasn't fully retracting, I computed a location to side drill the safe and push the bar back to its full retracted position.

With my business card still in the crack of the door, I turned the handle shaft and moved the locking bolts out

to their full thrown position. Sliding the business card up and down near the center of the door, I located the center bolt. When I first slid my business card into the door crack, it butted against the door stop. Measuring this distance told me the door thickness was one and one half inches. I added a half inch for the thickness of the door stop and figured another half inch should be close to the center of the half inch locking bolt. (A perfect measurement would have been 2-5/8 inches from the door face)

I drilled a hole through the side of the safe at my measurements. A pin light directed into the hole showed a bright chrome locking bolt! By watching the bolt and turning the handle shaft, I could see the bolt move back and forth. A hard rap on a punch against the locking bolt was solid, it didn't move. The bolt was retracted as far as it would go and the door still wouldn't open! The white masking tape seen in photograph 1, show the found locations of the locking bolts.



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My banging around on the door bolt gave a little more play to the door crack. My business card would now slide freely up and down the crack. I found a spot near the top of the door where the business card was hitting something. A pencil mark indicated where the card stopped while sliding the card upward. Coming down from the top gave me a second stop location. The space between the two marks was about $\frac{3}{8}$ inches. A quick check at the lower portion of the door gave the same $\frac{3}{8}$ inch space. Both spaces were $12\text{-}\frac{3}{8}$ inches from the top and bottom of the door. Two $\frac{3}{8}$ inch diameter pins (relockers) had to be preventing the door from opening!

Photograph 2, shows my magnetic drill rig mounted to drill for the top relocker. It was positioned to drill a

hole at twelve and three-eighth inches down from the top of the door and $2\text{-}\frac{5}{8}$ inches back from the door face. The hole gave a great view of the end of the relocker. A second hole at the same measurements from the bottom edge of the door revealed the second relocker. Probing both spring loaded relockers back and nudging the door caused it clear the door frame.

Photograph 3, shows the bolt works of the door. Note the smaller relocker pin just above the top locking bolt and the one below the bottom bolt. A thin metal cover encases the two vertical flat bars for their full length. It attached to the door by metal screws, but only on the inside edge. In *photograph 4*, the outer edge of the cover has slipped away and has released the relocker pin. I don't see how normal use could have caused

the cover to move. I suspect, when the door was standing full open, someone had been grasping the cover to pull the door closed. The slamming of the door jarred the loosened cover sufficient to release the relockers.

Another spring loaded relocker is positioned along the side of the lock case and fires downward into a notch in the center locking bolt. It is concealed from view by the retaining plate mounted to the back of the lock case seen in *photograph 3*.

I called Fred Brown of Brown Safe Company in San Marcos, California. He said this was an early version of a safe model produced for a chain of jewelry stores. Later production models included wires connected between the spring loaded relockers and the back cover of the safe lock.

TNL



3. The cover has been removed to show the carriage bar and bolt guides. Note the small relocker pins above and below the top and bottom locking bolts.



4. The loose cover allowed the relockers to fire.

SECURITY CAFÉ

Cam Handle By Holmlund

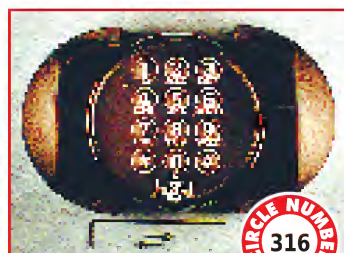


CIRCLE NUMBER
315

"The Cam Handle solves the age old problem all locksmiths face when installing cam locks in wood applications, that being how to hold the body from turning while tightening the nut. Cam Handle allows for easily maintaining any location desired and prevents the washer supplied with the lock from cutting a groove in the wood, thereby strengthening the installation.

The Cam Handle is compact, easy to use and a real time saver. A must for every locksmith's tool box. The Cam Handle fits most cam locks on the market and was invented by a working locksmith for working locksmiths.

Sargent & Greenleaf's Spy-Proof Cover



CIRCLE NUMBER
316

Sargent & Greenleaf, has produced a spy-proof cover for the 6100 Series electronic combination lock keypad. The new Model 6130 helps prevent unauthorized onlookers from learning combination codes as they are entered. The restricted opening leaves room for the operator's fingers to reach the keypad digits, but is shielded by projections on each side to greatly restrict

the field of view.

Made of ABS plastic for durability and long-lasting performance. The Model 6130 is easily and quickly installed, without having to remove the keypad housing or open the safe, and does not have to be removed when changing batteries. Installation time is minimal by simply placing the two identical halves around the housing, and securing them with a hex wrench and screws, which are provided with each spy-proof cover assembly.

New Multi-Function Cam Locks

Security Café

DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT

Fort Lock Corporation, continues a tradition of being an industry leader with the announcement of its Brass Finish, Multi-Function Cam Locks. For use on wood furniture and other applications where a high quality appearance is important, the Multi-Function 23000 and 24000 series flat key locks reduce your inventory requirements and insure that you have the exact lock needed when you're at the job. This product is available in six lengths, is supplied polybagged with all parts necessary for six different operating functions, and

features the Fort Lock Universal Keyway, which allows keying into all other manufacturers' key code programs.

Wall Safes



CIRCLE NUMBER
317

Buddy Products, carries a complete line of wall safes for every need. The wall safes install between wall studs in a

safe to \$176.50 for the wall vault.

Mortise Lock Style OMNILOCK



CIRCLE NUMBER
318

OSI Security Devices, announces the release of the new OM100, 300 and 500 Mortise Lock version of their popular OMNILOCK access control system. Available for both interior and exterior applications, the new series features support for up to 500 individual codes and an audit trail capacity of up to 750 event records per door. A programmable time schedule and holiday list provide scheduled access for 4 code groups. OSI's patented motor drive system allows for an estimated 100,000 operations from four "AA" batteries! The ADA compliant lever-set installs in minutes into a standard mortise door preparation and is available in an assortment of finishes.

New Cutter Wheel For Borkey® & Rytan® Key Machines

Gil-Ray Tools Inc., has recently designed a new wheel to replace the standard



CIRCLE NUMBER
319

© 1996 Gil-Ray Tools Inc. Our 51st year

Continued on page 20

SECURITY CAFE

Continued from page 18

quality cutters for Borkey® & Rytan® key duplicating machines. The new #GRP-R & #GRP-B cutters are made of premium CPM® M4 High Speed Steel. They feature a deeper tooth design and precision ground teeth for longer service and accurate key duplicating. This type of steel is known to last up to three times longer between sharpenings than conventional M2 HSS cutters.

These wheels replace the Borkey or Rytan 80 x 5 x 16mm cutters. Gil-Ray precision cutters are sold direct by Gil-Ray Tools through their cutter catalog.

New Office/Home & Depository Safes

Schwab Corp. is now pleased to announce the introduction of its new FireGuard Small Office/Home Safes. These small safes have a UL Class 350-1hr fire and impact resistance rating and come in three sizes.



Each safe is protected by a one year Parts and Labor Warranty and a 12 year After-The-Fire Replacement Guarantee.

In addition, Schwab is introducing a new line of Depository Safes. These safes, built for the temporary storage of large bills and valuables, are available in a variety of sizes including double storage compartment models. Depository options include drop slots, front loading doors and rotary hoppers. All Schwab Depository Safes have a Class B insurance security rating and are protected by a

life time product warranty.

Rotary Deposit Hopper Safes

Four models of rotary deposit hopper safes are available from Perma-Vault Safe Corporation. Ranging in outside dimensions from 13"H x 8 1/4"W x 11 3/4"D to 34"H x 12"W x 12"D, the safes have an anti-fish baffle to deter removal of contents through the hopper opening.

Constructed of heavy gauge steel, each of the Class B units has four pre-drilled anchor bolt holes on the bottom, permitting bolting and mounting to any structurally sound surface in a store or vehicle.

The large capacity rotary hopper opening (2 1/2" x 5 3/4" x 10 1/8") allows for easy deposits of cash or checks for interim protection. Security is preserved as the hopper is designed as a non-removable part of the safe and the large safe doors feature a relocking device.



Safes are available with either UL approved combination locks or dual custody safe deposit locks.

TOOL PAK 4RM

In response to customer demands for a sleek, streamlined system of organizing screwdriver bits and drivers, Paktek Inc., has developed the new 4RM. The new 4RM eliminates searching for these small but vital items by keeping them close at hand.

4RM allows you to keep your tools with you,



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SECURITY CAFÉ

accessible at all times, yet allows you freedom to move about.

4RM features: □ The adjustable velcro straps fit comfortably over clothes. □ Designed to carry a variety of small tools, bits and drivers. □ 2 flap covered pockets keep tools in place. □ Made from Dupont Cordura to give years of service. □ Left or Right handed, keeps your tools at your fingertips. □ Tailor your 4RM to your specific job. □ Makes you more effective and efficient.

4RM is available from Tool Pak dealers or from Paktek Inc.

Electronic Lock File Is Newest Member Of Protection Plus™ Family

Fire King® International, is making document management simple with its easy-to-read and easy-to-use Protection Plus® Electronic Lock File. With the

new quick-access lock and fireproof construction, file documents enjoy unrivaled security and protection from fire, theft and unauthorized use.

The electronic lock features a 10-digit keypad and comes pre-programmed with a master code. Once purchased, the safe-owner



can easily add, delete or change up to eight additional codes to allow co-workers quick access to the files.

"The programmability of the lock is a real useful

feature," says Carlisle. "If you want to deny someone access to the safe who previously had it — you simply delete the personal code."

Another unique feature of the Electronic Lock File is the automatic locking drawer. The Electronic Lock File provides the ultimate document security because the file locks every time the top drawer is closed.

Fire King is based in New Albany, Ind.

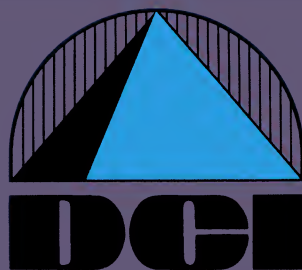
American Lock® Series 700 Padlocks Now With Removable Shackles

American Lock Company, has improved its popular Series 700 padlocks to allow shackles to be changed using common locksmith tools. This important new feature lets locksmiths

service American's top selling, solid steel padlock quickly and easily without drilling.

In the new Series 700 locks, a single dogpoint screw gives access to the shackle. Locksmiths can simply use a 1/8" Allen wrench to remove and change a shackle from one length size to another. Both 1" and 2" shackles are available for Series 700 padlocks.

While servicing the lock is easier than previous pin construction, padlock security is not compromised by removing the screw alone. Even if the screw is opened by unauthorized persons, the shackle will not be released and the lock will not open until the key is inserted.



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GENERAL SECURITY
Test Article #118

Interchangeable Core Locks- Best Style

(part 2)

At the end of part 1, I made reference to three different pinning systems used by Best IC locks: A-2, A-3 and A-4. Most standard commercial pin tumbler locks use .115" diameter pin tumblers, while Best interchangeable core locks use narrower .110" diameter pin tumblers. The use of a .005" narrower pin allows Best locks a closer key cut and pin chamber spacing. A typical commercial pin tumbler lock cylinder has a pin to pin spacing of .155" or .156, whereas a Best cylinder uses a .150" spacing pattern. The A-2, A-3 and A-4 systems all use the same diameter pins, while each has its own separate increment and pin stack.



by
Sal Dulcamaro

to "9," and have the following dimensions: 0 = .318, 1 = .3055, 2 = .293, 3 = .2805, 4 = .268, 5 = .2555, 6 = .243, 7 = .2305, 8 = .218 and 9 = .2055. That slot in the gauge will let you very quickly decode a Best style key on the A-2 system.

The gauge's middle slot is made for A-3 system keys. Its seven depths range from "0" to "6," with the dimensions: 0 = .318, 1 = .300, 2 = .282, 3 = .264, 4 = .246, 5 = .228 and 6 = .210. The "0" cut depth is identical in both the A-2 and A-3 systems, and as you will see, is also the same for A-4 system keys.

The bottom slot of the key gauge is used for decoding A-4 system keys. Its six depths have the smallest numerical range of the three, but its increment of .021" is the largest of them all. Going from "0" to "5," the depths are as follows: 0 = .318, 1 = .297, 2 = .276, 3 = .255, 4 = .234 and 5 = .213.

Master Keying Capabilities

There was an earlier reference to master keying capabilities of the three different systems. In the A-2 system, there are ten .0125" increments. By industry standards, this increment is much too small for a single step progression master key system. As a consequence, master keying A-2 would require a two step progression and would effectively turn ten .0125" increments into five .025 increments.

Reserving one depth in each chamber to the master key, this would leave four depths to progress the change keys. The theoretical changes in such system would approach 4,096 in a six pin chamber lock and 16,384 for a seven pin lock.

With a slightly larger increment, the A-3 system was intended to go to a single step progression. Setting aside the one depth for the master key, A-3

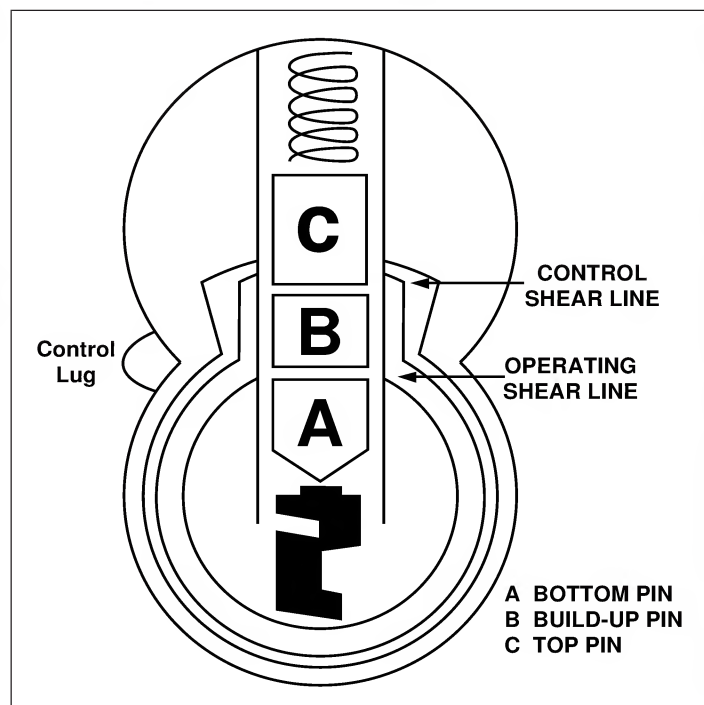
(in single steps) would have six depths to progress. In a six pin lock, A-3 should approximate 46,656 theoretical changes. The seven pin version would be nearly 279,936. A-3, in theory, could produce huge master key systems. In practice, its increment of .018" was just a bit too small to avoid lock malfunction problems. With the combination of lock and key wear along with manufacturing tolerances, an .018" master pin could jam a lock.



1. A gauge decoder for A2, A3 and A4, pinning systems.

The different increments used in the A-2, A-3 and A-4 systems have an effect on the master keying capabilities of each system. A-2 uses a .0125" increment with ten depths. A-3 has an increment of .018" and seven depths. With an increment of .021", A-4 has six depths. *Photograph 1*, shows a key decoder gauge that works with all three systems.

The top slot of the gauge is for A-2 systems. The ten depths run from "0"



1. An inside view of the pin stack with an operating key inserted.

A-4 appears to be the modified alternative to A-3. It is also designed to use a single step progression when master keying. By increasing the increment from .018" to .021", one depth was lost. The seven depth A-3 system gave way to the six depths of A-4. Saving one depth for the master key, five depths would be left to progress the key changes. Using A-4, a six pin lock would have nearly 15,625 theoretical changes and 78,125 changes for a seven pin lock.

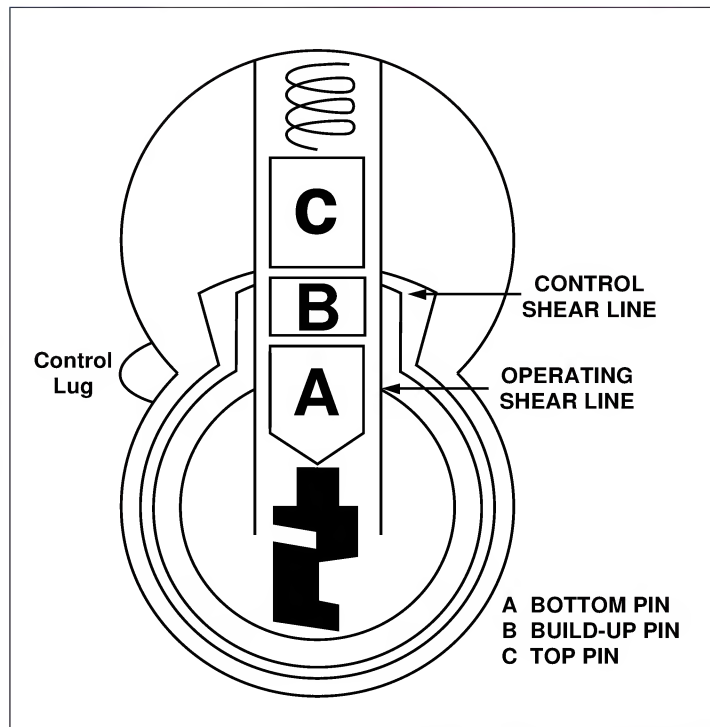
I-Core Shear Lines

Illustration 1, shows a drawing of a cutaway view at an individual pin chamber for a Best style interchangeable core. In part 1, of this article, photographs provided a detailed view of each of the components of an I-Core. *Illustration 1*, demonstrates more clearly how it is constructed and how it works.

A standard lock cylinder would have the shell and plug as the main components. For a key to operate, it would allow bottom pins (or combinations of bottom and master pins) to be raised even with the top

surface of the plug or shear line. A Best style interchangeable core will do that too. In an I-Core, however, there is an intervening component in between the shell and the plug. That component is the control sleeve, and its existence creates a second shear line in an I-Core that does not exist in a standard lock cylinder.

In *illustration 1*, an operating key raises the top surface of the bottom pin even with the operating shear line. Providing that the pins in all the other pin chambers were at the shear line, the key would cause the plug to rotate and operate the lock. In this



2. An inside view of the pin stack with a control key inserted.

style I-Core lock, the operating shear line is the commonly shared surface between the plug and the control



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sleeve. The pin identified as "B" is the build-up pin. To someone unfamiliar with Best style I-Core locks, that pin might be guessed to be a master pin. There is no apparent use or purpose for the build-up pin in this illustration, but its use becomes quite apparent in the next one.

Illustration 2, shows a control key in place of the operating key. The control key in this illustration has raised the top surface of the bottom pin above the operating shear line. It is obvious that the plug cannot rotate within the control sleeve now. If you look carefully, you will see that the control key has done more than just lift the bottom pin past the operating shear line. It has also lifted the build-up pin far enough up so that its top surface is even with the control shear line. The control shear line is the commonly shared surface between the control sleeve and the shell. If the build-up pins in all the other pin chambers have also been raised to the control shear line, the control sleeve will be able to rotate.

Unlike the plug which can usually rotate 360 degrees, the control sleeve for a Best style I-Core is designed to rotate only 15 degrees clockwise. The purpose of that limited rotation is to draw the control lug (which is machined into the control sleeve) inward for the purpose of installing or removing the I-Core.

Pin Stacks

A Best style interchangeable core lock is considerably more complicated than your standard pin tumbler lock cylinder. In a non-master keyed lock, each pin chamber contains a bottom pin, a build-up pin, a top pin and a tumbler spring. That totals three pins in each chamber. If a cylinder is master keyed, a master pin must be added to each tumbler position where the operating key and master key cuts are different from each other. That makes four pins in each of the pin chambers. With so many pins per chamber, it's easy to see why there would be strict rules about the height of the pin stack. The haphazard stacking of pins in each chamber would almost guarantee some kind of lock malfunction.

Because of the different depth increments, each system (A-2, A-3 and A-4) has its own pin stack requirements. The A-2 system is by

far the most common one found in installed Best style cores. In a properly coded Best style core, the combined stack of bottom, master, build-up and top pins should always be the same combined length. If you added together the numerical value of each pin in an individual pin chamber, for the A-2 system, the total should equal 23. Bottom pins are assigned the values "0" to "9." Master pins, build-up pins and top pins are assigned values "1" to "19". Some of these sizes are only assigned for use as one or another of those three classifications, while others can be used as two or all three types of pins.

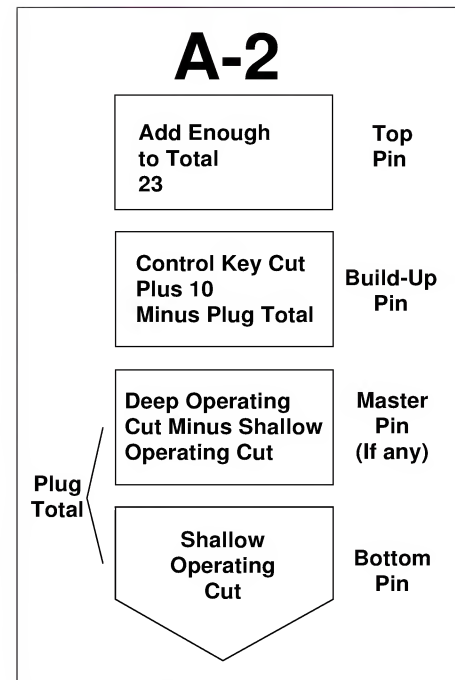
Pinning Formula

To properly code a particular pin chamber, you must know the depth of cut for that pin chamber for each key that works with the core. Those keys include: the control key, operating key (change key), and master key if that chamber is to be master pinned. I will choose just one position cut for each of the keys as an example, but you can use the same formula to figure all pin positions in a Best style core. For the example, the control key depth will be "5", top master key (TMK) will be "7", and change key will be "1".

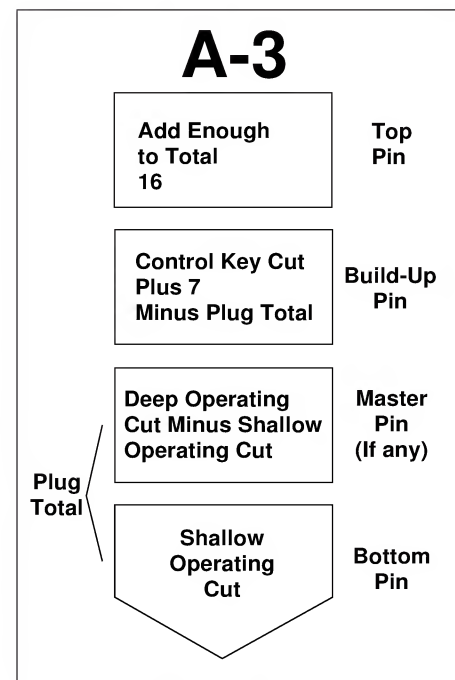
Using our example, the bottom pin should be the value of the shallower cut of the two operating keys. The two operating keys are the master and change key. The shallower cut belongs to the change key, with the value "1". The bottom pin, therefore, is "1".

Next you must determine the difference between the deep operating cut (in this case, the master key cut "7") and the shallow operating cut (the change key cut "1"). That number would determine the master pin. The difference between seven and one is six, so the master pin to stack on top of the bottom pin would be "6".

The purpose of the build-up pin is to raise the stack high enough so that the control key causes the top surface of the build-up pin to be at the control shear line. The difference in height between the operating shear line and the control shear line is .125", or ten increments of .0125". Those ten increments become an important part of the formula for determining the size of the build-up pin. It works as follows: the control key value - in this case "5" - is added to ten equaling "15." Then



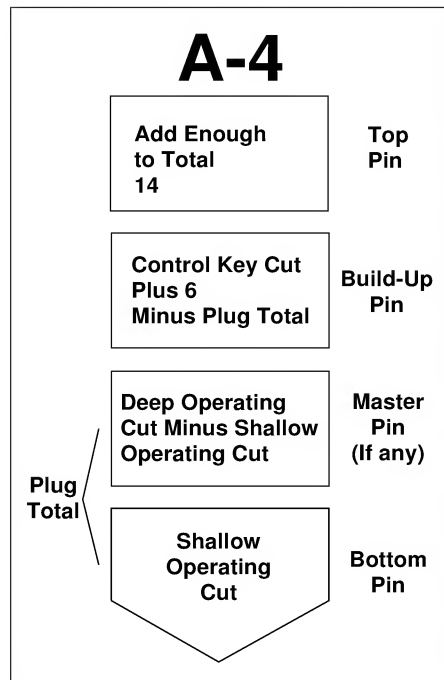
3. A simplified formula for an A2 pinning system.



4. A simplified formula for an A3 pinning system.

the plug total of the bottom pin "1" and master pin "6" which equals "7" is subtracted. Taking "7" from "15" leaves "8" as the value of the build-up pin. The plug total is determined by adding the bottom pin and master pin if a chamber is master pinned, but is just the value of the bottom pin if the chamber is not master pinned.

So that the pin stacks in all the chambers have the same height, Best had determined the value of the total stack to be "23," for the A-2 system. The way to determine the top pin is to



5. A simplified formula for an A4 pinning system.

add together the values of the bottom pin, master pin - if any - and the build-up pin, and subtract that value from "23". For our example, we have determined the following: bottom pin "1", master pin "6" and build-up pin "8". That total comes to "15." When subtracted from "23," we can conclude that our top pin will have the value "8."

Illustration 3, shows a diagram that simplifies the pinning formula. You can use it to determine the pinning in each pin chamber of a Best style I-Core. Illustration 4 and 5, has the equivalent diagrams and formulas for the A-3 and A-4 systems. They each have a different value increment and pin stack than the A-2 system.

Decoding the Control Key

Because Best has strict pinning rules for their cores and specific values for the pin stacks, it is possible to use those rules to determine the key bitting for a control key. You must have the core in your hands to begin the process, but a properly coded core can reveal the control key bitting to someone who knows the formula.

The information is partly contained in the assigned value of the top pin. You must know if you are dealing with A-2, A-3 or A-4, because they each have different length pins. For an A-2 system core, you subtract the value of the top pin from "13", the resulting number is the depth of cut (in that tumbler position) for your control key. We can use the previous example used for determining the pinning to test the formula. The top pin for that pin chamber was "8." Using the formula, "13" minus "8" leaves "5." If you check, you will see that the control key cut was indeed the number "5." You can determine the cuts, chamber by chamber, until you decode the entire control key bitting. With that information, you can create a control key to pull other cores in the same group of locks.

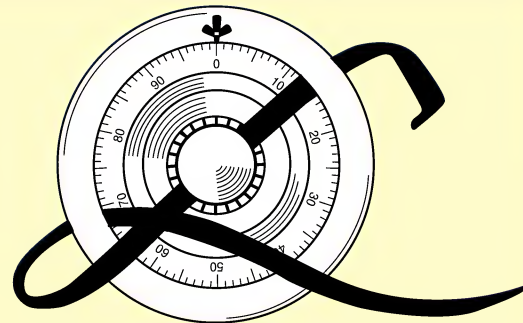
Since A-3 and A-4 have different pin stacks, they each have a different formula for decoding a control key. Nine minus the top pin value will determine the control key cut in an A-3 system. For A-4, eight minus the top pin will identify the control key cut.

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AUTOMOTIVE SECURITY
Test Article #119



1995 Kia Sportage 4X4

by Hankman



The Korean built Kia Sportage 4X4 is a sporty little vehicle that is quite simple to service and easy to open in the event of a lockout.

Photograph 1. The Kia cars are built by Kia Motors, a Korean car company. The first of these cars came into the USA in 1994. However, Ford and Mazda both own a percentage of Kia Motors and have been building both the Ford Escort and the Mercury Tracer since around 1991.

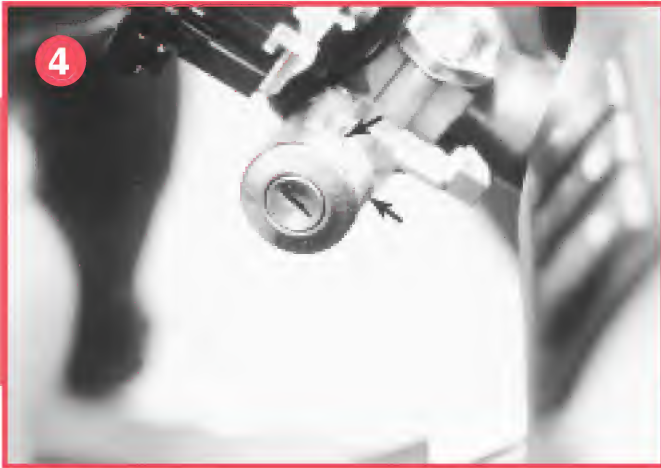
Photograph 2. The ignition lock is on the column and is covered by a plastic shroud.

Photograph 3. Remove the Phillips screws from the bottom of the shroud and remove it.

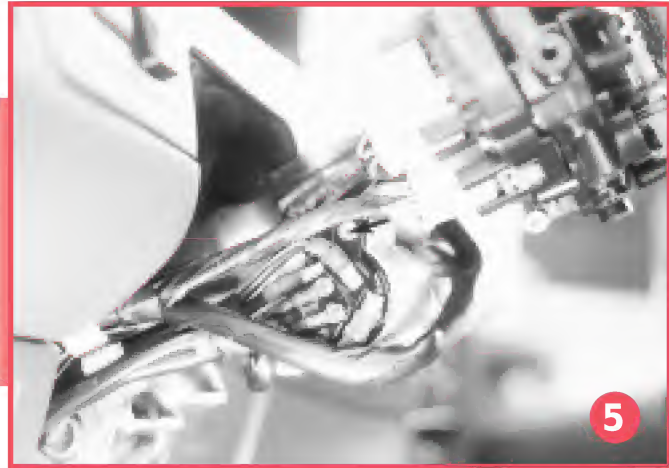


Continued from page 26

Photograph 4. The key cylinder is held in the lock by two hollow roll pins. If you use a Dremel tool with a cut off wheel, cut a slot beside these pins and then pry them out. You can now remove the key cylinder without removing the whole lock.

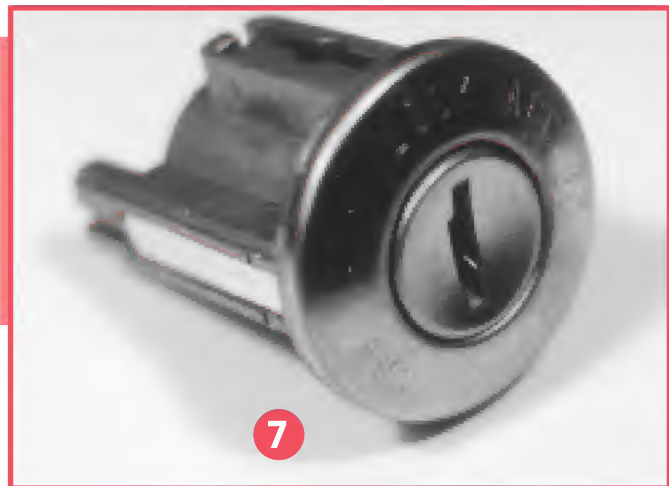


Photograph 5. If you need to remove the whole lock from the column, go to the back of the lock and remove the electrical switch by removing the one Phillips screw seen here which holds the switch on.



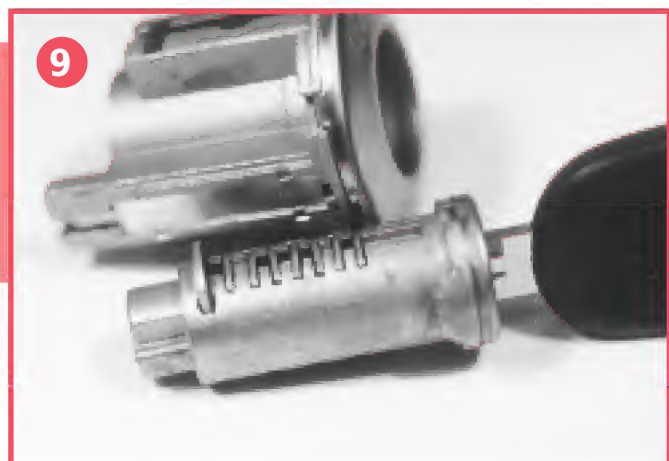
Photograph 6. The lock is held on the column by the two shearhead bolts shown. Punch them around counter clockwise and remove the bolts and the lock.

Photograph 7. This is the key cylinder removed from the lock.



Photograph 8. The retainer which holds the plug in the case is at the rear of the plug. Depress this retainer and push the plug out the front.

Photograph 9. With the plug removed you can see there are seven tumblers plus the retainer at the rear of the plug.





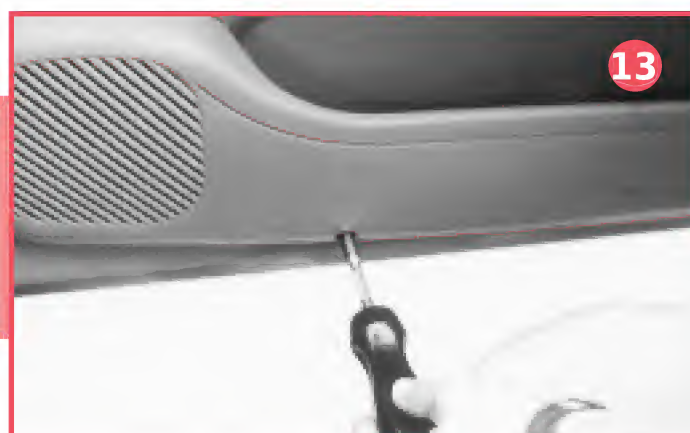
Photograph 10. With the key removed you can see the ignition is double sided with four tumblers on one side and three on the other side. With the retainer removed you can see that it is a full retainer (all the way around) Photograph 11, will show the advantage to this.



Photograph 11. Take a hook and go all the way to the rear of the plug, hook the retainer and pull it down and pull the plug forward enough to hold the retainer down. Now bring your pick forward and pick the #1 tumbler down and pull the plug forward, then pick the #2 tumbler down and pull forward. Continue with #3, #4, etc., until you have walked the plug out. Here's two hints; if you can first pick the lock to the ACC position it will retract easier. If you cannot pick it, you may need to keep working the buzzer bar up off the tumblers as it comes out. If you can remove the buzzer unit from the lock, by all means do it.



Photograph 12. The door lock cylinder is located in the outside door handle. You will have to remove the inside door trim panel to remove it.



Photograph 13. Remove the one Phillips screw on the bottom of the panel.

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Photograph 14. Next remove the screw from the inside door handle.



Photograph 15. Disconnect the linkage clip at the rear of the handle and remove the handle.



Photograph 16. There is one screw at the bottom of the inside pull handle with a trim cover over it. Pop the cover off and remove the screw.



Photograph 17. There is a plastic trim cover at the top front portion of the panel. It just snaps off, be careful not to break it.



Photograph 18. The door panel will now pry off, it will come off very easy.



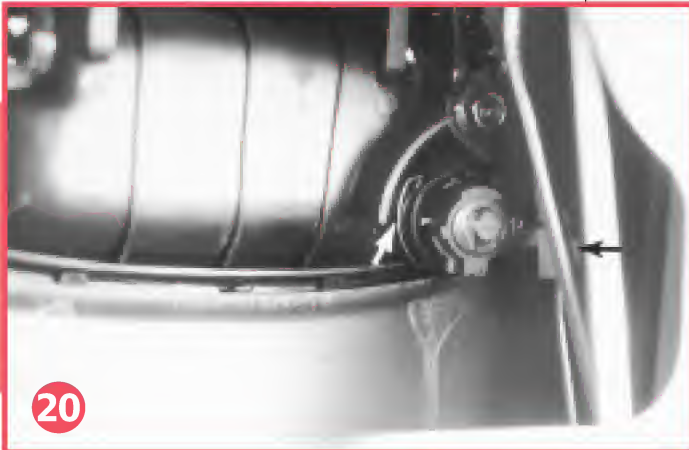
Photograph 19. To remove the inside plastic weather cover, start at the top right corner and pull it back across the top and down the right side.



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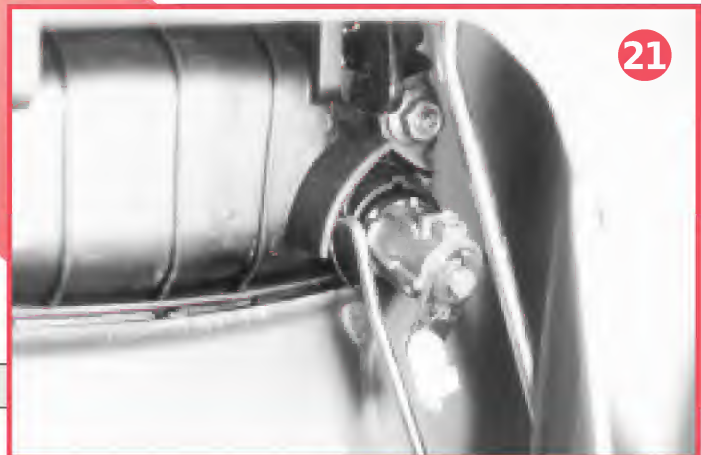
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Photograph 20. The black arrow on the right shows the linkage rod hooked to the pawl, disconnect it. The white arrow on the left shows the spring wire retainer which holds the lock cylinder in the handle, pry it out of the way.



Photograph 21. The lock cylinder will now come out the back. There is no need to remove the whole door handle, this panel and door is very easy to work on.



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Photograph 22. Once the lock cylinder was removed, this vehicle did not have a code number on it. I would assume that the only place to find the code is on the metal tag that comes with the key.



Photograph 23. There is a horseshoe type clip holding the tailpiece on, remove the clip and the tailpiece.



Photograph 24. The face cap is staked on at two positions, lift up on the stakes with a small screw driver and remove the cap. You will reuse it.



Photograph 25. With the face cap removed, notice the dust cover and spring, this is the old Toyota type.



Photograph 26. The plug will now come out the front. This plug has all seven tumblers just as the ignition cylinder. The difference being this plug is not double sided, these seven tumblers are all in a line on one side.

Photograph 27. The tumblers do have the depth number stamped on them, however the numbering is reverse from our system. The #4 depth equals our #1 depth, the #3 equals our #2, the #2 equals our #3, and the #1 equals our #4.

**FOR THE CODE SERIES ON THE KIA SPORTAGE SEE
The National Locksmith, January 1995, page 101.**



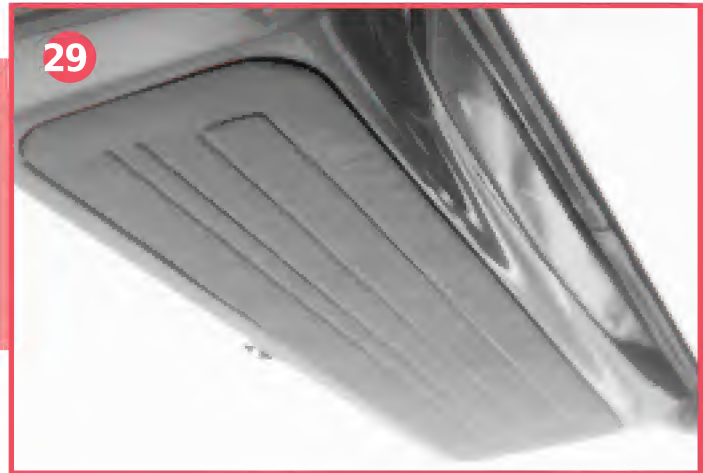
Continued from page 32

TAILGATE LOCK



Photograph 28. The tailgate lock cylinder is in the handle as seen here, however it is easy to get out.

Photograph 29. Remove the inside trim panel simply by prying it off.



Photograph 30. Pull the inside plastic weather cover back over half way across, the lock cylinder is in the middle.



Photograph 31. You can see that as soon as the weather cover is pulled back, the lock cavity is wide open.



Photograph 32. Snap the linkage open as seen in this photograph.



Photograph 33. Remove the spring clip shown and pull the lock out.

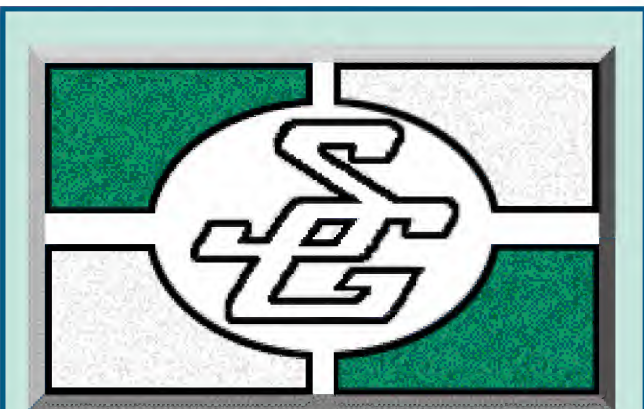
Photograph 34. To disassemble the cylinder, first remove the tru-arc clip shown here. Hold your hand over it, there is a large heavy spring under the metal plate.



Photograph 35. The plug and case will now come out the back, you can see the large spring in this photograph.



Photograph 36. The face cap is peened over all the way around, however it is not hard to work it up and it will not show when the complete cylinder is back together.



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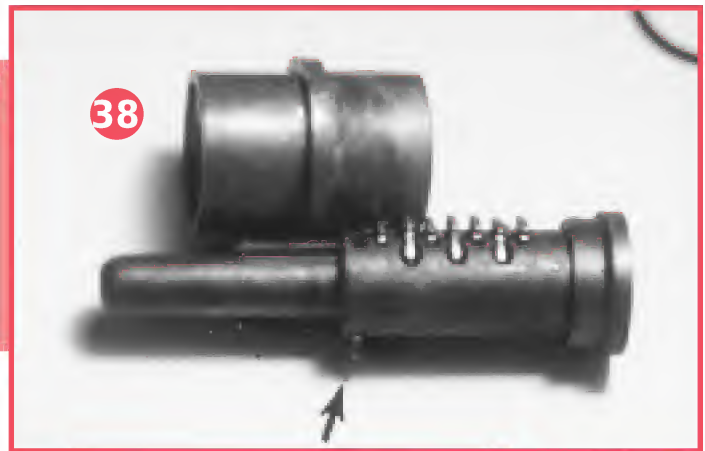
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Photograph 37. The retainer which holds the plug is located at the rear of the plug. Depress the retainer and push the plug out the front.



Photograph 38. This plug is the same as the door plug, it has all seven tumblers in it and is single sided with all tumblers in a line. The arrow shows the location of the retainer.

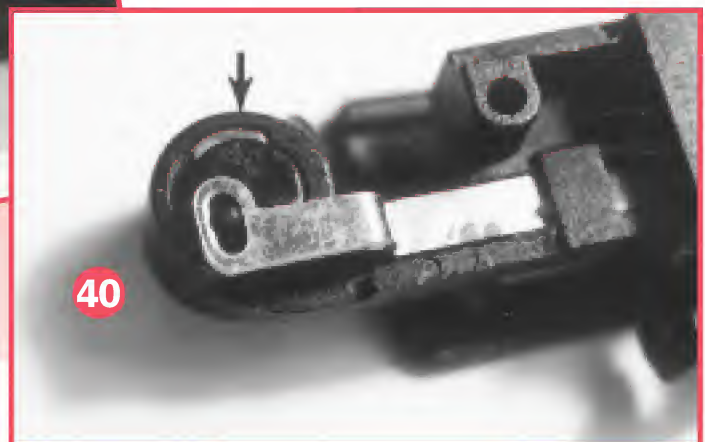


Photograph 39. The glove box is a very straight forward procedure. Open the door and remove the two screws and remove the lock.

GLOVE BOX



Photograph 40. Look at the back of the lock and you will see the retainer which holds the plug in. Depress the retainer and push the plug out the front.



Photograph 41. This glove box lock contains the last four tumblers only. If you have problems impressing the door or ignition lock, you might try pulling the glove box lock out and getting these four cuts, then you will only need to impression the first three. Your Auto Security Products distributor has these lock cylinders available. To open this vehicle, all that is needed is a Slim Jim, it has a vertical button and the rod is wide open. All in all, this vehicle reminds me of the gravy days of the 70s and early 80s.
Code Series Y7001-Y8200
Key blank X233
HPC1200 Card CF301
Curtis Cam KK1
Carriage KK1A
Spacing- #1-.098, #2-.197, #3-.295, #4-.393, #5-.492, #6-.591, #7-.709 Depths- #1-.284, #2-.264, #3-.244, #4-.224
Remember if reading depths from the stamped tumblers, reverse them for the above depths.





ELECTRONIC SECURITY
Test Article #120

Securitron's DK-26 **Part 1**

by
Jake Jakubowski

Improving on a good thing is hard to do. I mean when you have a product that is tough, user friendly and consistently does the job that its supposed to do, why mess with it?

Nearly two years ago, I wrote an article about Securitron's DK-25P, a new touch pad and CPU board for single door access control. Securitron had developed the DK-25P to replace their DK-20+. I felt fortunate to be selected to field test the DK-25P, and the article I wrote (The National Locksmith, June, 1994, page 28) compared the DK-25P's, installation and performance characteristics to the older DK-20+.

In my opinion, the DK-25P won hands down. Not that there was anything functionally wrong with the DK-20+, mind you (True, the membrane-driven touch pad could collapse prematurely if subject to abuse or chronic hard use,) but Securitron was looking to develop a tougher, more dependable product that would give longer service under the severest of conditions. The DK-25P filled the bill nicely.

Even though the DK-25P used the same CPU board that the DK20+ used, the life expectancy of the unit under actual use conditions improved dramatically, since the touch pad was definitely tougher and more durable.

When Mark Henderson, from Securitron, called me and told me about their new DK-26 touch pad that was to soon be released for field-testing, I was impressed by Mark's description of the radical changes and potential for expansion that Securitron had built into the new DK-26. Of course, I wanted to know if

**It may be new,
but is it better?**



1. The DK-26 on the left and the DK-25P on the right.

I was in line to field test one of the new units, I hung up the phone with a smile on my face.

About a week later, the Big Brown Truck rolled into my driveway and delivered a DK-26 and CPU board. Before the UPS truck had backed out of my driveway, I had the package on my desk and was busily cutting it open with my trusty pocket knife. I was just a tad on the anxious side to see how different this unit really was from the DK-25P.

The first thing I pulled out of the package was the touch pad itself. The only notable change seemed to be there was now three LED's rather than two. Securitron had added a yellow LED in the middle (See photograph #1, which shows the DK-26 touchpad on the left and the DK-25P on the right).

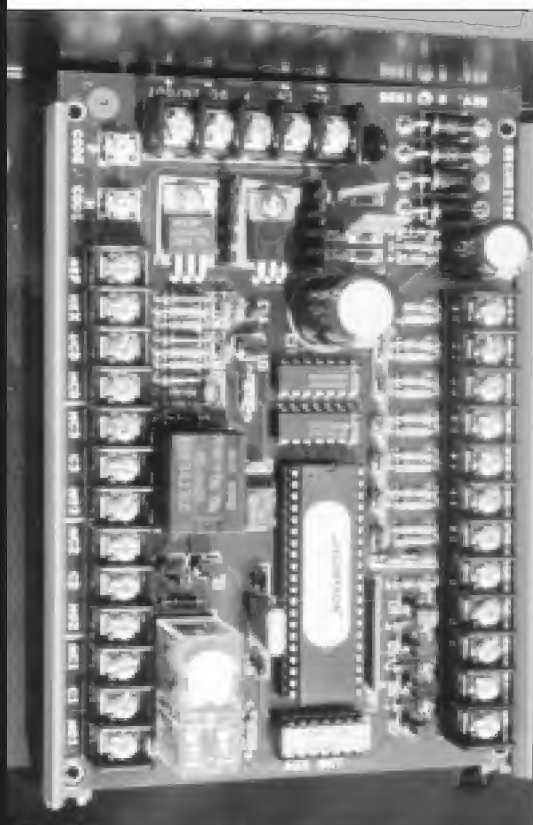


3. CPU board for the DK-20+ and the DK-25-P.

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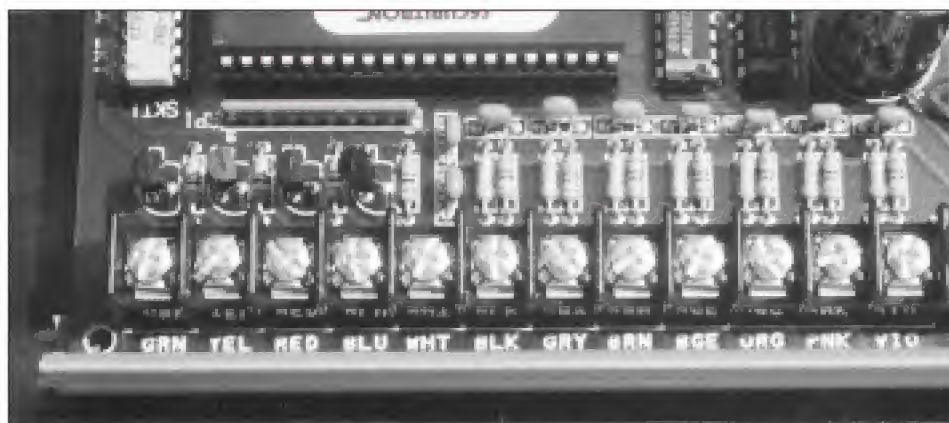
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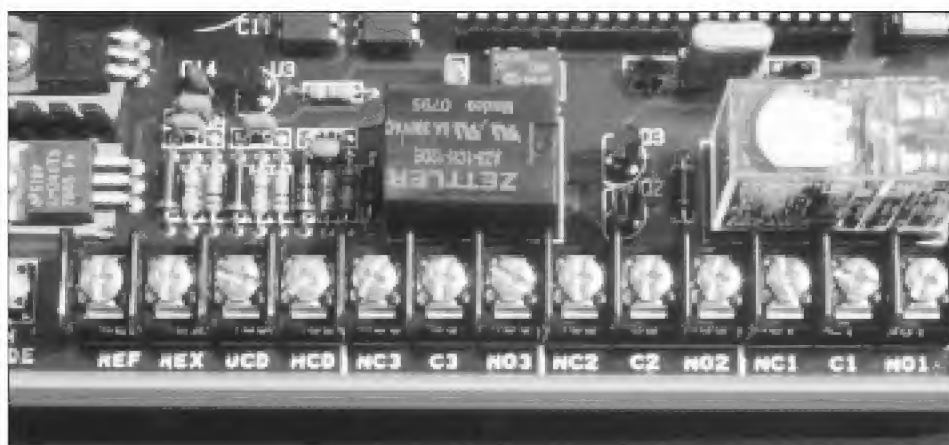


2. The DK-26 CPU board has been completely reconfigured.

The next thing I noticed (actually I heard) was a rattle when I picked up the box the CPU board came in! My first thought was that something had been damaged in transit. I didn't waste any time opening the box to discover that the new CPU board is protected by a steel housing. What I heard was the CPU board rattling against the sides of the new housing.



4. The DK-26 CPU wires up color-to-color.



5. More options for auxiliary exit switches are offered.

When I lifted the cover off of the housing (See photograph #2,) I noticed the CPU board that you see in the photograph is totally different from the older CPU board of the DK-20+ and the DK-20P (See photograph #3.) The reasons for the re-design of the CPU board is due to several function and expansion changes such as: increased touch pad programming options, system expansion capabilities, and of course, easier installation characteristics.

Some system expansion possibilities will most likely include the ability to "plug-in" additional CPU modules to allow for multi-door operation, or maybe auxiliary card reading capabilities and expanded user code capabilities. It is not unrealistic to expect that future expansion of the DK-26 could allow for as many as two hundred individual user codes, or possibly designated door user codes for applications requiring multiple door control, and, all of it with audit trail potential!

I've said it before and I'll say it again, when the folks at Securitron set their minds to improving a product, they don't settle for no half measures! They don't just improve the way the



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6. You can use one or more opening switches with the DK-26.

system works and what it can do, they even consider small details like making it easier for the installer. There are slotted mounting holes for easy mounting to any type of surface. There are tabs for holding the CPU in place once the unit's mounted and a large elliptical shaped knock-out hole at the bottom right hand corner of the housing for wiring.

When it comes to wiring the touch pad to the DK-26 over its predecessors, Securitron really simplified the process for the installer. If you'll notice in photograph #4, the DK-26 CPU board has colors stamped at each terminal. On the older models, the terminals had a numeric designation and you needed to consult your wiring diagram to put the "black wire on terminal #26, etc." As you can see in this photograph, it's simply a matter of putting the green wire to the "grn" terminal and the yellow wire to the "yel" terminal until you run out of wires to place on the proper terminals! This feature alone will make the DK-26 more popular with ol' boys like myself who believe in doing it the easy way whenever possible.

Photograph #5, shows another change in the DK-26's board over

previous DK series CPU boards. The various terminals shown here are for wiring different exit devices to the CPU, such as wiring in extra remote or auxiliary exit switches like the PB2-E shown in photograph #6.

Photograph #7 shows the "P" button for changing the "Program Code" and the "H" button for changing the hard code, which can be used as a "Master Code" if there is more than one DK-26 system in a building. It can also be used as a "walk-a-way" in instances where one user code is all that is required on the door.

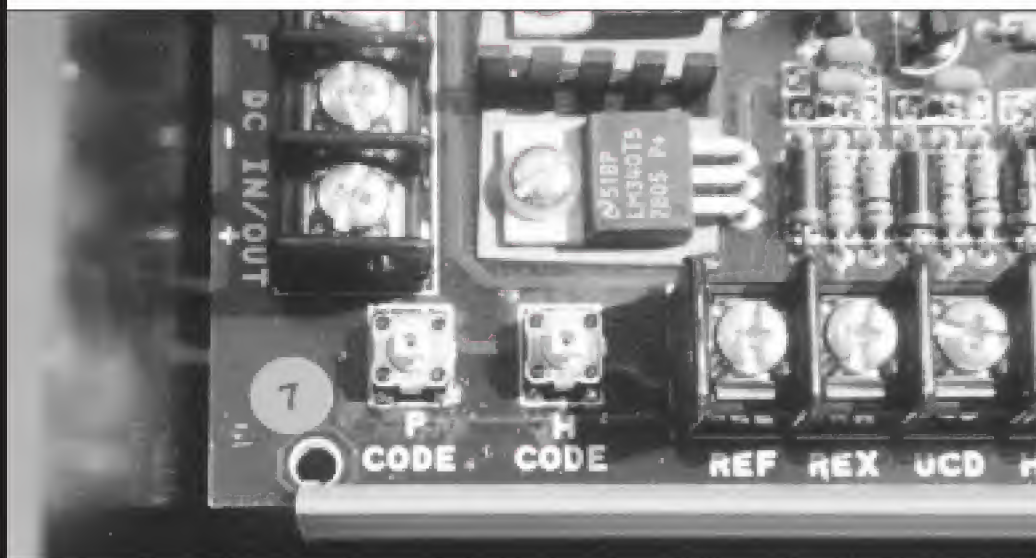
User codes are set by utilizing the Program Mode and then entering each user code. By the way, the DK-26 will accept up to fifty-nine separate user codes, and the user codes can be added or deleted right from the touch pad!

In fact, the program code can also be changed from the touch pad if so desired. The only reason you need the "P" and "H" buttons is for your initial programming sequences, or if for some reason the E-PROM memory crashed and was lost. It is also used if the person responsible for the program code lost it.



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7. "P" and "H" buttons for changing the "Hard" code and the program codes.

Photograph #8 shows another new feature to the redesigned CPU board. Notice that you have an "AC" terminal and an "IN" terminal. Next to the "IN" terminal there is an "F" (Free) terminal and the DC IN/OUT terminals. Here again, Securiton has made wiring and set-up, just a little easier for the installer

O.K.! Up to this point, you have just seen what I saw when I took the

DK-26 out of the package and laid it on my desk. What you can't see is what the DK-26 is capable of that the DK-20, DK-20+ and the DK-25 wasn't.

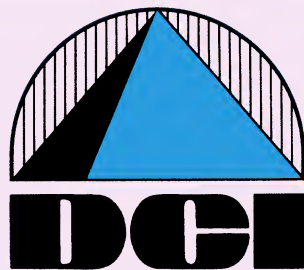
What Securiton has done with an already great product is, it took the best of the DK-25P, utilized it in the DK-26 and added more practical features to give the DK-26 the ability to grow as new and better technology comes along.

For instance: The DK-26 has a true ten button code capability. The buttons are not sequenced in pairs like the previous DK series touch pads were. With the DK-26, you virtually have millions of possible code combinations. Because there is such a variety of code possibilities, plus the DK-26's ability to accept user codes of different lengths, (two to seven digits) the DK-26 is smart enough to recognize "subsets" of other codes.

A 'subset' is a series of numbers that are contained in a longer series of numbers. Let's say user one entered "1-3-3-5-8" as their code. If user three entered "3-3-5" as their code, the lock would release if the DK-26 could not recognize the latter series of numbers as a subset of the former. Or if "3-3-5" happened to be a subset of the Program Code, the Program Code could not be entered since "3-3-5" would release the door before the Program Code could be completed.

The DK-26 avoids this problem by rejecting any code that is a subset of another code in memory! It signals this rejection by showing the single red (error) flash on the LED instead of the normal two flash confirmation

Continued on page 45



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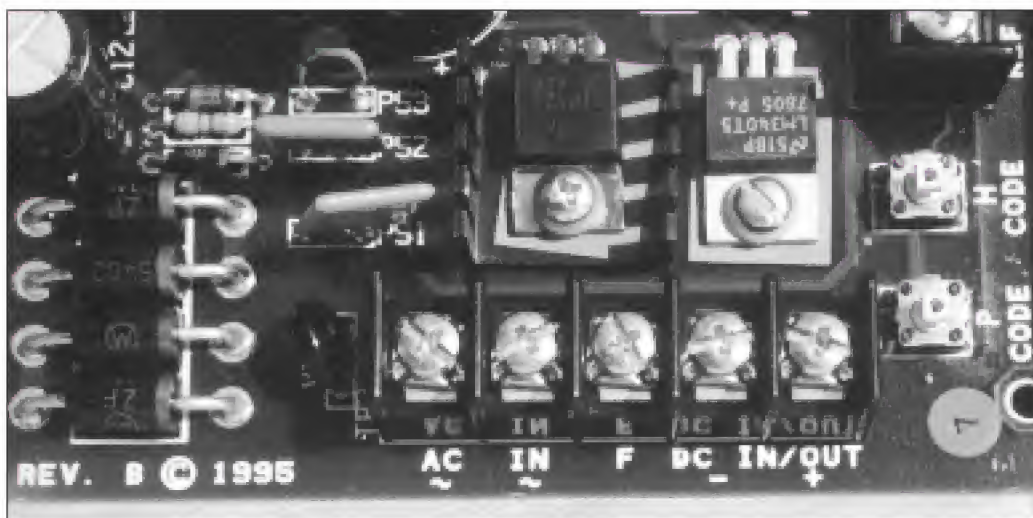
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Continued from page 42

signal. You would get the same "error" signal if you tried to enter a duplicate code.

To enter a new user code, management enters their Program Code, followed by depressing the "Bell" key which will cause the yellow LED to flash rapidly, indicating that the DK-26 is in the program mode. Next, enter the user code prefix, followed immediately by a new two to seven digit user code. Then press the "Bell" key. Two red LED flashes will confirm the entry and the rapid yellow flash will return. Press "Bell" key again, which terminates the program mode. Try the new user code. Once entered, the door should unlock.

If management wants to delete a user code, they simply enter the Program Code, call up the user's I.D. number (i.e., 01, 02, etc.) and then hit the "Bell" key. If they don't depress the "Bell" key, as long as they don't enter a new code that would "overwrite" the current user code, the unit will time out and delete the code anyway. Hit the Bell key again to exit the program mode. The DK-26 can currently handle up to 59 individual user codes. As I mentioned earlier,



8. More wiring options are available than previous models.

add-on modules will be able to increase user capacity many fold.

The DK-26 touch pad will be available in either a brushed stainless finish or in a powder coated black. Those two finish options should allow you to provide your customer with a decorative, as well as a functional, touch pad that will fit in well with most building decor's.

Next month I'll show you how easy the DK-26 installs. After all, that's

what most of us want to see in access control. Uncomplicated, straightforward installation characteristics and reliable service under tough user conditions. Believe me, the DK-26 has 'em. Right from the get-go.

Don' y'all ferget, now. Be heah next month. Y'all heah?

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BEGINNER'S CORNER

Flat Steel Keys



by
Eugene Gentry

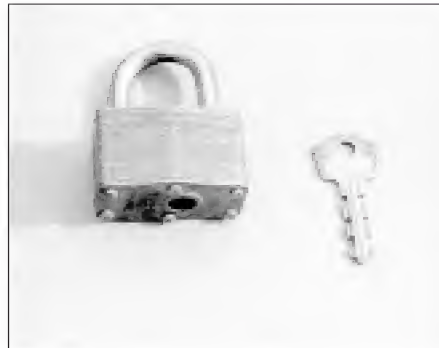
You don't read much about flat steel keys, but there are still a lot of them around. Notice the various types of keys in *photograph 1*. I receive a lot of calls to make flat steel keys for chests, money boxes, grandfather clocks, jewelry boxes, suitcases, storage boxes, and padlocks just to name a few. Some of the antique chests use a flat steel key, some use a steel bit key, and some use a steel barrel key. A steel barrel key is one which has a hole in the end to accommodate a post located in the lock.



1. Various steel keys for chests and cabinets.

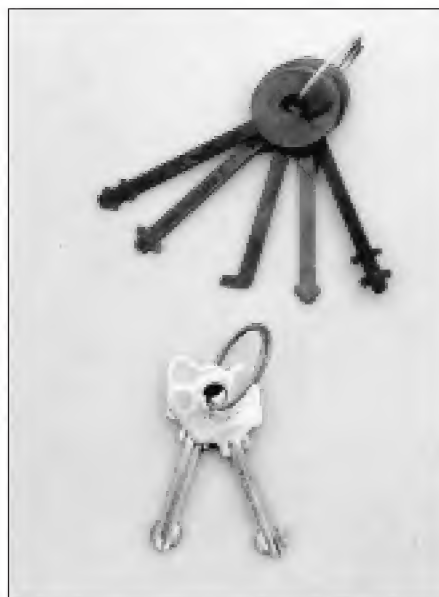
Flat steel keys should only be originated or duplicated on a machine with a steel cutting blade. This cutting blade is flat with no taper like a duplicating or code cutting blade. The cuts can also be filed by hand if one is impressing or duplicating, but this can be a slow process. To originate or duplicate a bit key or barrel key, there are specialty machines for this or it can be filed by hand. Use a ward file and a calipers to measure the location and size of the cuts.

Flat steel keys for warded locks are easy to impression. A vice grip, or



2. Master laminated padlock with right hand steel key.

impressing tool is used to apply pressure on the key blank so the marks can be seen. The blank is cut or filed so the cut will clear the wards. If the marks are on exact opposite sides, then the cuts will have to be exactly opposite. If you have trouble seeing the marks, the blank can be smoked with a candle, allowing for better vision. When hand filing the cuts, the cuts need to be shaped at a 90 degree angle for a professional look. If you have trouble locating a matching blank, the bows can be slightly



3. Pass keys and pick keys for warded locks and padlocks.

different, but the tips need to be the same. Also, make sure that the height of the blank is the same as the key you are duplicating. If it is not, file the blank to match the original. The steel key used in a warded Master padlock is shaped so that there is a right hand key blank, and a left hand key blank. (See *Photograph 2*). The keyway is shaped so the right hand blank will not fit in the left hand lock and vis-



4. Keyway slot extends into face plate.

versa. A pass key can be made by eliminating all the cuts except the tip. The tip portion opens the lock. See *Photograph 3*, for pass key and picking tool for warded locks.

The lock shown on *Photograph 4*, is on a storage chest. Note that the keyway slot extends into the face plate. A throat cut first needs to be made before the key can be turned to impression. Insert the blank into the lock and make a mark on the blank at the face plate. Make the throat cut wide enough to clear the face plate.

The barrel key is found on some of the antique chests, drawers or clocks.



5. Barrel keys for chests, drawers and clocks.

They are identified by the hole in the end that accommodates a post located in the lock. (See Photograph 5.) I obtained two barrel keys to replace one that had broken. They looked like the correct size and shape, except the hole in the end was a little too small and the key would not enter the lock. I was able to drill out the hole on a drill press so the blank would fit. The new blanks were then hand filed to match to broken key.

Sometimes it pays to stop at the car port sales. At one I paid \$2.00 for a box that contained about 200 old steel, bit and barrel keys. (See Photograph 6.)



6. Ring of steel keys purchased at car port sale used as tryout keys.

Recently I talked with a locksmith who wanted nothing to do with steel keys or old locks. My reply to this, "Send them to me." **TNL**



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BUSINESS BRIEFS

News from the Locksmithing Industry

INDUSTRY INTERVIEW...

This month's interview is with Pete Neisel, President and CEO of Schwab Corporation.

How long have you been in the field of safes or security?
25 years.

Can you describe a little of the history on how you came into this field?

I served two years in the U.S. Army after graduating from Colgate University in 1961. I spent several years with Xerox Corp., before joining John D. Brush Company's Sentry Group in corporate marketing. I was Vice President of Marketing for John D. Brush from 1970 until I came to Schwab in 1984, also, as Vice President of Marketing. After a few months, I took over the position of President and CEO, and in 1989 Schwab was purchased by management.

What has been the most enjoyable aspect of working in this industry?

I've always liked working with dealers and other manufacturers throughout the industry. Recently, I've particularly enjoyed monitoring and being part of the growth and changes that are taking place both in products and in the ways we all service our customers.

What has been the most challenging aspect of working in this industry?

Actually there are two. Meeting the demand for high quality, lower priced products is always a challenge. I'm sure that will never change. The other greatest challenge for Schwab is getting locksmiths — who are used to selling security — more interested and comfortable in selling fire safes, cabinets and files as another form of security. Locksmiths' unique influence with their commercial customers can open doors to many companies in need of record protection. There is tremendous business opportunity out there for those who do.

What changes have you seen take place in your industry? Why?

Consumers are demanding more sophisticated, better quality, less expensive products that are delivered on shorter lead times than at any time in recent history. Increased

competition is requiring manufacturers to find new ways to meet these demands without driving up the dealers' cost of doing business.

What direction do you think this industry is taking? Why?

Locksmiths are now being encouraged to become "security professionals." More and more, they will be asked to provide everything from keys, locks, safes, and alarms to consulting services to top management. While national credentials and certifications are useful, the locksmith industry must understand the long term profit opportunities in meeting all the security needs of the communities they serve.

How do you think these changes have affected the locksmith?

These changes are already pushing those who can't adapt out of business and those who can adapt to look for new ways to service consumers and maintain profitability. In what is already a specialty field, the dealer or locksmith cannot afford to limit business opportunities by specializing in a single aspect of their business.

What changes do you see necessary if the locksmith is to be successful in the future?

As I mentioned, the "locksmith" of today needs to become the "security professional" of tomorrow. They need to market themselves and their products with this in mind.

What do you feel the future holds for the locksmith and his role in security, especially relating to your field?

Locksmiths can use their unique position and credibility to learn how everyone from corporate America to homeowners are vulnerable and at risk. With this information they can then offer profitable solutions to these problems including, of course, fire protective products.

How do you think the locksmith can best serve his customer?

The locksmith can best serve customers by catering to all of their security needs. Ask questions, probe, educate. Determine all of the security problems that customers face and offer quality solutions and products from those manufacturers who are prepared and able to support your (the locksmith's) marketing initiatives. **TNL**



Pete Neisel President and CEO of Schwab Corp.

PACEL Corporation, a software development company in Manassas, VA, has acquired the rights to MSD company software products, CAM - Computer Aided Manipulation, SOS - Safe Opening Simulator and Drill Template Designer as well as the services of Randy Moore as Product Development Manager. In his new capacity, Randy will continue to provide technical support of existing programs and is completing the development of our newest products, Win Keys, a master key software program and Win Records, a key management system for use by locksmiths and end users. Win Keys and Win Records are scheduled for release in the Spring of 1996. To place orders or obtain technical service please contact: PACEL Corporation, 703-257-4759 voice pager.

Morse Watchmans, Inc. Mulligan is responsible for the promotion of additional sales, national accounts and coordinating the activities of Morse Watchmans direct sales force and dealer/reseller network.

Weslock National, Inc., was awarded first place in the hardware category for the company's



600 Series cylindrical locksets packaging. The first place ribbon was presented at the 21st Annual Hardware Industry Week® Packaging Exposition in Chicago, Illinois.

Tripp Lite announces its **PowerZone** web site on the Internet. **Tripp Lite** has joined forces



with Neoglyphics, one of the Internet's most innovative creators, to produce a site that has over 100 pages of information with dynamic graphics and cutting-edge features. For more information on Tripp Lite's PowerZone web site, contact Tripp Lite's International Headquarters at info%triplite@mcimail.com.

PATENT AWARDED TO ALYN CORP.

Costa Mesa, CA, Robin A. Carden, president, Alyn Corporation today announced the receipt of a United States patent for its boron carbide metal matrix composite known as Boralyn. The patent covers sporting goods, commercial and industrial applications.

Boralyn is a miracle material that is revolutionizing fabricating methods. Developed and supplied by Alyn Corporation of Costa Mesa CA, Boralyn is an advanced metal matrix composite proven to be stiffer and lighter than aluminum, harder than steel, extremely fracture resistant, and much more predictable than carbon fiber or ceramic composites.

Alyn Corporation is the major world supplier of boron carbide, a key ingredient in the production of Boralyn, the hardest man-made substance on earth. Robin Carden, Alyn's president and an authority on advanced ceramics and metal composites, left the defense industry in 1989 to found the company for the purpose of developing boron carbide derivatives. Commercial, industrial and consumer products can all be improved with the use of Boralyn.

Carden points out that Boralyn is environmentally safe, efficient to make, available in castable ingots and in extrusion forms, and is easily welded with conventional equipment. The raw materials that comprise Boralyn are plentiful and cost efficient.

The world market for Boralyn is endless. The Alyn Corporation has created a metal matrix composite that will impact almost every product in the world marketplace.

Interactive Technologies, Inc., announces that **Chuck Briskey** has been promoted to **Senior Vice President of Operations**, overseeing manufacturing and distribution. **Bob Brunius** has moved up to **Senior Vice President** of Engineering department. **Jack**

Reichert is named **Vice President of Finance and Administration**. **Jim Kaczowski** is **ITI's Vice President National Account Management**. **Lauren Christiansen** is new **ITI Director of Customer Service**. **Lou Berkovitz** will become Human Resource Manager in 1996.

Central Pennsylvania Locksmith Association, elected the following new board members for the association:

George A. Sharply, CML	President
Franklin Busch, CRL	Vice President
James Shermyer, CPL	Treasurer
Alan Keister	Secretary
Robert Wagner, CML	Sgt. At Arms
Charles Folcomer, CRL	Director, 4 yrs
Robert Mohl, CRL	Director, 4 yrs
Charles Berkheimer	Director, 2 yrs

Steadfast Corporation, manufactures of Steadfast Auto Security systems and POP&LOCK truck security accessories, announces the promotion of **Sean Frederick to General Manager**. Sean

has been with Steadfast for 8 years, advancing through the years to the position of Controller. In addition to his new duties, Sean will continue to serve as Controller.



The North Carolina Locksmith's Association, Inc., held their election of officers for the years 1996-1997 and they are as follows:

President	Paul Atkinson
1st Vice President	Reid Skinner
2nd Vice President	Jim Stewart
Treasurer	Howard Kincaid
Asst. Treasurer	Joe Esteridge
Sgt. At Arms	Larry Coughenour
Asst. Sgt. At Arms	Steve Bright
Board Members	Bill Breazeale
	J.B. Bernard
	Adrian Busse
	Sam Allman
	Ron Cox
	Skip Resch
Secretary	Kathy Stewart

**COVER
STORY!**

A new finishing process is said to be the solution
to an age old problem.

The Finish That Lasts A Lifetime

by Greg Mango



"The Finish That Lasts A Lifetime"

The Challenge: To tarnish, pit, flake, corrode, or discolor.

The Challengers: Photograph 1, L to R - Weiser, Schlage, Titan, Master, and Baldwin.

The Claim: That the products could stand up to the worst abuse mother nature could muster without adverse effects being noticeable to the finish.

Our Attitude: Oh yeah? Well, we'll just see about that. A claim like that cannot go unchallenged.

Salt, heat, humidity, perspiration, rain, chemicals; all have long been the nemesis of brass or brass finished hardware, especially bright brass or polished brass. Take a look at any bright brass hardware product that is exposed to the elements for any length of time and you will find a tarnished, pitted, discolored product. Some products will almost turn black with discoloration over the years. The challenge for manufacturers has been to produce a bright brass product that would repel such effects, enhancing not only the beauty of the product, but the desirability as well. There are now several manufacturers that say they can turn back the hands of time, eliminating the unsightly hardware of yesteryear that will shine a lifetime. We at *The National Locksmith*, opened our torture chamber once again (the in-house testing laboratory) draped on laboratory coats, slipped on playtex gloves, garnished glasses, and proceeded to indulge in some maliciousness.

The Finishing Process

Each manufacturer in our test uses a slightly different manufacturing process to produce their own unique finish, but the standard is called "vapor deposition." This process is unlike the typical lacquer or plating process that has been used over the years in which the product is dipped into a chemical solution to produce and maintain the finish of bright brass products. The vapor deposition process is accomplished by producing an electronic arc created from a metal electrode inside a vacuum chamber. When this is accomplished, gas - such as oxygen or nitrogen - and a finishing material - usually a zirconium nitride mixture - is released in the chamber. The electrons flowing within the chamber cause the vapor particles to propel against the surface of the hardware condensing as a film and bonding like armor. The result is a tough durable shell - about the thickness of a human hair - that is then polished to a jewel like finish. Various types of vapor deposition methods have been used for

1. The participants in our test are from left to right; Weiser, Schlage, Titan, Master, and Baldwin.



over 20-years, this is not a new technology. Chemical vapor deposition was initially introduced and used in the late 60's on metal-working tools. The process was said to increase the life expectancy of a cutting tool for example, two to ten fold. Historically, vapor deposition processes have been relatively expensive to perform as a result of slow deposition rates and expensive vacuum equipment. In recent years, the use of vapor deposition methods has expanded at an extremely rapid rate due to the reduced operating costs and increased demand for high-performance materials and coatings. The vapor deposition process is also said to be environmentally safe because there are no volatile compounds used and no hazardous or toxic waste produced.

Warranty Warnings

Each manufacturer's finish is referred to by a different name. For Baldwin its "Lifetime Finish;" for Titan there is no particular name reference; for Master there is no particular name reference; for Schlage its "Ultima" and for Weiser its "Brilliance." All offer a Lifetime Warranty - with some restrictions - to its finishes. You should however, be aware of the limitations and restrictions in each manufacturer's warranty. For example, some manufacturers provide their particular finish only to the exterior portion of the hardware and not to the interior. As an example: On a double cylinder handleset, the interior deadbolt will not have a lifetime warranty on the finish. Others only offer a lifetime warranty to the finish when the product is used in a residential application, not commercial. Be aware of these restrictions some manufacturers offer and inquire about it when using a particular product. Your customer should also be made aware of any warranty restrictions, especially if they are purchasing a product based exclusively on - and because of - the finish warranty. Also be aware that the lifetime warranty is not available on all manufacturers products, and those that do offer it, do so on selected items only.



2. (Above) All the handlesets were immersed in a highly concentrated solution of rock salt and water then covered in saline paste.

3. (Below) Handlesets submerged in a chlorine acid mixture.

On With The Tests

Saline Abrasion: Photograph 2

Salt can have a devastating effect on metal, especially porous metal like brass. Salt can literally eat its way through a hunk of metal in time. The first in our battery of tests was a salt immersion. With a really nasty gleam in our eyes, your team of mad scientists, bedecked in lab coats from *The National Locksmith*, mixed a highly concentrated batch of rock salt and water in a bucket. In a real test, we'd be able to tell you the exact percentage ratio of salt to water. But we're not all that formal around here, so let's just say that these locks were going to get saltier than pickles in brine.

We cruelly soaked the locks for a solid week, sneering all the while about how these "life long finishes" were about to flake off before our eyes. When we fished the locks out of our corrosive brew, we allowed them to air dry. Then we poured off the water from the saline solution, leaving behind a muddy salt paste. But you know what? We still felt that we could be yet a little more sadistic, so we smeared the salt paste over the surfaces of all the hardware and left them to dry and harden like a crustacean for over a week.

After two weeks soaking and crusting with salt, we were ready to clean the locks up and have a good laugh about these so-called "miracle finishes." Much to our surprise, when we cleaned them up, the darned things looked perfect. Back to the drawing board. Let's think of something else to ruin these finishes. We just can't stand to lose a good fight!

Chlorine Acid: Photograph 3

For our next bout in the torture chamber...I mean our official Test Lab... we chose Chlorine because many people have pools in their back yard and chlorine acid is the typical chemical used to clean the water. A high concentration of chlorine used in water will produce a gas that permeates the air and surrounding structures. The acidic chemical reaction of chlorine on metal can cause a

4. (Below) Marc and Greg perform the most vicious torture of all by building a fiery inferno.

5. (Right) The handlesets were soon covered with a black crusty soot.



discoloration and deterioration to the finish. For the test, we snickered as we poured a chlorine concoction and hurled the locksets into the mix. The smell was pungent and smoke filled the room. The scene was right out of a Frankenstein movie, all that was needed to complete the aura was the lights flickering on and off and a few lightning bolts flashing in the background.

At this point, your official testers from The National Locksmith are a little chagrined to admit that when we rinsed the locks off, they were still perfect, still unscathed. So far, the hardware had withstood everything that we had put it through. It was time to get radical!

A Burning Inferno: Photographs 4, 5, 6 & 7

The last and final test we subjected these handlesets to was by far the most brutal of all. Hey, we figured fire can goof up just about anything if you're really in a bad mood. So in a scene out of Carrie, we doused all six handlesets with generous streams of

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6. (Above) The charred remains after the fiery inferno.

7. (Below) After 10 minutes in the fiery furnace, the finish no longer shined.



lighter fluid. Cackling madly - and by this time our co-workers were starting to get a little nervous about our mental health - we lit a match and tossed it on the locks, setting them ablaze in a roaring inferno for about 10 minutes. The handlesets crackled due to the intense heat and soon turned black with soot.

We jumped for joy around the burning locks, dancing a primal dance of destruction; the only thing missing was the war paint. Well, it was a while before the units cooled down enough so we could rub off the soot to see what lay beneath. We just knew we'd be rubbing off the finishes along with the ashes!

Can you guess the outcome? After a little rubbing, darned if the locks weren't just like new. At first we

8. (Right) After all we put the hardware through, all could still be buffed to a brilliant shine.



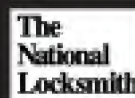
were frustrated and dejected. We eyed the forklift, remembering the door frame that had withstood repeated attacks months back, (*The National Locksmith*, April 1995) but then reality settled in and we realized that we were just going to have to admit defeat. The final score? Miracle finishes 4, *The National Locksmith* lab team 0.

Now, we'll be the first to admit that this is in no way a concise and all conclusive test, and was not intended to be a long term test as to the life-long condition of these manufacturers products. We did however, make a valiant attempt to destroy the finish in a relatively short period of time under very intense conditions.

The Conclusion

After hanging up our lab coats, sliding off our gloves and removing our goggles, the conclusion was unanimous, the new finish used on these products is very good. In photograph 8, just the pull handle portion of the handleset was cleaned to show the drastic contrast between the finishes after our testing. We were all quite surprised that even after an intense inferno, the finish on all could still be buffed to a shine, very impressive. It appears that the manufacturers have found a solution to an age old problem, and so far it looks like it works. No longer will a beautiful piece or bright brass hardware look antique in just a few years of service. This is something every homeowner will love.

And what about your frustrated locksmith scientists? Well, we went home and kicked our dogs. We feel much better now. **TNL**



MANUFACTURER TRAINING SEMINARS

— by Bill Reed —

MEILINK

The company has been offering classes to the locksmith trade for the past four years. These classes have dealt with the Meilink product line, how it fits in the market place and with its competitors. It also address how the sell each segment of the line. The class continues with marketing of safes. While it deals with primarily safes, the class is generic in scope and can apply to any product or service. The class touches on psychological aspects of the locksmith and continues into establishments. Merchandising of safes is also covered in the class, here Meilink touches on how to prepare for the sale. The better the merchandising, the easier the sale.

The selling of safes, another segment of the class goes into selling the proper safe to the customer. How to ask the right questions at the time the customer is willing to supply the information. How to deal with the customer on a professional level and what the customer expects from the retailer they are making the purchase from is also covered.

Underwriters laboratories labels are also covered. A video of the Meilink TL-30 video retest is confirmation of this part of the class. Both fire and burglary labels are covered.

Meilink also offers a certification class. This class offers a hands on service and repair on the Meilink hand change combination lock. Each attendee is supplied a lock.

There will be three Meilink safe doors in the class which locksmiths

are shown drill points, position of hard plate, relockers and the best way to drill if necessary. Discussions on tricks to service and repair Meilink safes is also included.

The certification class then puts the locksmith on the Meilink service center list and is called upon to service Meilink products in the field.

All classes are taught by Judd H. Penske, National Sales Manager,

With the marketplace and products offered being more diverse than ever before, the need for continuing education is even more important today than just a few years back.

Meilink Safe Company and vary in cost from \$10.00 to \$35.00. For further information call 1-800-MEILINK.

STRATTEC SECURITY CORP.

The original equipment manufacturer of the Passkey, PATS and Passlock, knows that as car-buyers push for the new age of auto locks, many locksmiths worry about the new technology. The company realizes that locksmiths must adapt to the changes, and that there is a mistaken belief among some that they will need to buy a lot of expensive, new equipment, or that they could be forced out of vehicle work altogether by locks that can be serviced only by dealers.

Other locksmiths have been servicing Passkey for 10 years, and they already know they can stay on

top of the new technologies with help from STRATTEC. The longtime leading supplier of original equipment locks in the U.S., considers locksmiths its partners in the industry and makes a point of helping them stay on track.

Training seminars featuring the new technologies are a big part of that effort. Training sessions conducted by STRATTEC representatives will be held across the country throughout the year. Virtually any locksmith who wants this kind of up-close instruction can have it.

The half-day or day-long seminars are arranged through STRATTEC™ distributors. The sessions normally center on the latest locks and keys, and questions from locksmiths in attendance are encouraged. The seminars include lots of information on new technology as well as hands-on instruction, such as lock disassembly and repinning techniques. The most recent literature on the locks and keys is provided, and participants are able to order stock right then and there.

Local distributors organize the seminars and usually advertise them through direct mail to locksmiths, through local, regional and national trade publications and through locksmith associations. Fees to cover the expenses of the seminars are determined by the organizers. STRATTEC representatives are not paid for their involvement.

The STRATTEC seminar at the annual ALOA Show is a high point of the year for many automotive locksmiths. It is a chance for them to learn about the latest products from the leading original equipment



manufacturer in the United States. The 1996 conference will be held during late July in New Orleans.

details about the seminars, contact your local distributor.

In addition to these full-scale

STRATTEC 1996 SEMINARS

DATE(S)	SHOW	LOCATIONS
4/18-21/96	PLAA	Alberta, Canada
6/21-23/96		Syracuse, NY
7/25-27/96	ALOA	New Orleans, LA
8/3/96	Clark Security Products	Denver, CO
8/10/96	Wilco Trade Show	Oakland, CA
September, date unknown	Clark Security Products	San Diego, CA
11/1-3/96		Reno, NV

Seminars already have been held this year in Nashville, and at the H. E. Mitchell Show in Portland, Ore. Later this month, a seminar will be held at the PLAA Show in Alberta, Canada.

As the year progresses, watch for STRATTEC seminars in Syracuse, N.Y., during June; at the Clark Security Products show in Denver and the Wilco Trade Show in Oakland, both during August; at the Clark show in San Diego during September; and in Reno during November. For more

Show in Atlantic City, the K-D-L Hardware Show in Seattle, and the American Lock & Supply Show in Anaheim, Calif.

For more information contact John Ottman, Marketing Manager, STRATTEC 414-247-3333

MEDECO FACTORY CERTIFICATION CLASS INFORMATION

Training classes are held at the Medeco factory in Salem, Virginia and

are also offered by Medeco distributors and locksmith associations throughout the United States. The "Medeco Mechanical Training Schedule" lists the dates and locations of all scheduled classes and is available from Medeco. Classes held at the Medeco factory in Salem, Virginia last 1-1/2 days and cost \$50.00. Medeco will provide lunch on both days but students must provide their own transportation and lodging. Medeco will provide a list of hotels, directions and a complete itinerary once a specific date is reserved. To reserve a spot in a class held at the factory call Carol Cox at 540-380-1734 and send a **non-refundable** \$50.00 check, payable to Medeco Security Locks, to:

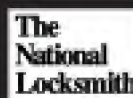
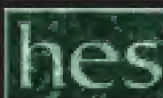
Training Department
Medeco Security Locks
P.O. Box 3075 • Salem, VA 24153

Classes given at locations other than the factory last 8-1/2 hours and the cost of the class is determined by the individual sponsor with prices ranging from \$65.00 to \$150.00. To make reservations for these classes call the contact person listed on the "Medeco Mechanical Training Schedule".

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MEDECO FACTORY CERTIFICATION CLASS SCHEDULE

DATE	LOCATION	TYPE	SPONSOR	CONTACT	PHONE
4/12	Toronto	Standard	Factory Canada	Heather Lochner	519-888-7000
4/19	Anaheim	Standard	American	Debbie Dixon	909-371-1088
4/20	Anaheim	Standard	American	Debbie Dixon	909-371-1088
4/23-30	Australia	Standard	ATM		
5/15-16	Salem, VA	Standard	Factory	Carol Cox	703-380-1734
5/19	Memphis	Standard	McDonald Dash	Jim Thomas	901-797-8000
5/24	Edmonton, Alberta	Closed	Solicitor General		
5/25	Edmonton, Alberta	Standard	Medeco Canada	Ken Barry	604-272-6555
6/1	Seattle	Standard	Clark	Sue Wright	800-942-5275
6/15	St. Louis	Standard	Hoffman	Scott	314-426-6309
7/10-11	Salem, VA	Standard	Factory	Carol Cox	703-380-1734
7/26-27	New Orleans	New Products	ALOA		214-827-1701 ALOA
9/13	Kitchener, Ontario	Standard	Factory Canada	Heather Lochner	519-888-7000
9/18-19	Salem, VA	Standard	Factory	Carol Cox	703-380-1734
11/13-14	Salem, VA	Standard	Factory	Carol Cox	703-380-1734

The Standard Certification Class covers the following topic:

1. Cylinder operation, drill & pick resistance & part names.
2. Disassembly and assembly of Medeco mortise cylinders.
3. Key & pin specifications.
4. Decoding a Biaxial key using key reader.
5. Reading a cylinder pinning sheet.
6. Applying maximum adjacent cut specifications.
7. Proper pinning of a Medeco mortise cylinder.
8. Operation of cam & switch locks.
9. Proper cylinder lubrication.
10. Overview of product line.
11. Tools used to service Medeco locks.
12. Levels of key control.
13. How to master key a Medeco cylinder.
14. Reading a matrix.
15. How double cuts are used in a master key system.
16. How to write out cylinders pinning for master keyed cylinder.
17. Interchangeable core operation & pinning rules.

In addition, classes held at the factory will cover:

18. Setting-up keying conferences and writing a premise survey.
19. Standard Key Coding terminology.
20. Labeling a 2, 3 and 4 level master key system.
21. How to read a master key matrix.
22. Cutting keys on a Medeco Biaxial key machine.
23. Medeco key machine adjustment procedures.
24. Factory tour.
25. Optional keying conferences to lay-out specific master key systems.
26. Optional demonstration of Insite Electronic Access Control System.

Please note the Standard Certification Class is the only type of class currently being offered.

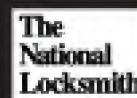
All students will receive a technical manual, Biaxial key decoder, Medeco screwdriver, and a Medeco pen. A fifty question open book test will be given at the end of the class. All who pass the test will receive a Medeco certificate and a Medeco shoulder patch.

For students planning on attending a class held at the factory, the closest airport is in Roanoke, Virginia which

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is approximately 10 miles from Salem. You should plan on arriving the evening before the class and should schedule a flight out sometime after 3:30 p.m. on second day of the class. The class starts at 8:30 a.m., ends at 4:30 p.m. the first day and ends at 3:00 p.m. the second day. The following hotels are reasonably priced and are located close to Medeco:

Holiday Inn - Salem
181 & Exit 137 • Salem, VA
540-389-7061

Comfort Inn - Salem
151 Wildwood Rd. • Salem, VA
540-387-1600

Super 8 Motel
300 Wildwood Rd. • Salem, VA
540-389-0297

Knights Inn
301 Wildwood Rd. • Salem, VA
540-389-0280

SECURITY RESOURCES, INC.

Crisscrossing America hosting several seminars will be Bill Reed and Steve Young. Just some of the subjects offered is: Safe Penetration, Group 2 Safe Lock Servicing, Picking, Codes & Code Tips, '96 Ford 8-Cut

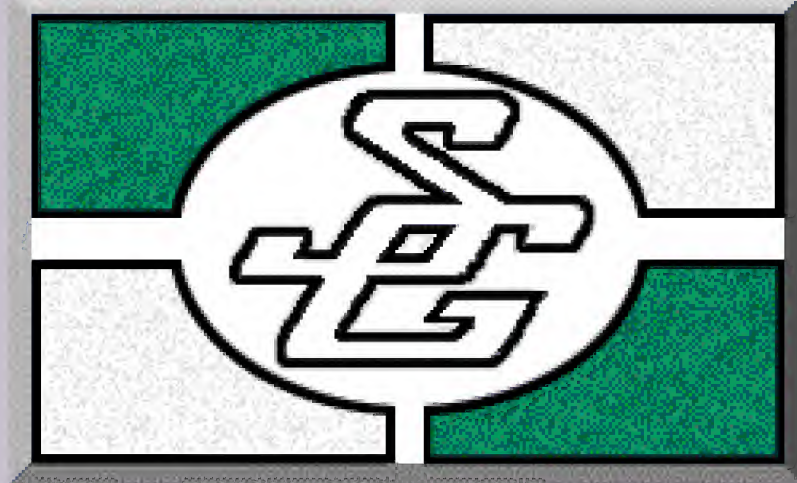
SECURITY RESOURCES, INC. SEMINARS		
DATE	LOCATION	SUBJECTS COVERED
4/13	Jacksonville, FL	Complete Auto Lock Workshop, Codes & Code Tips, Shop Promotion.
5/4	Norfolk VA	Auto Lock Workshop, Codes & Code Tips, Safes.
5/11	Dallas, TX	Complete Auto Lock Workshop, Codes & Code Tips, Group 2 Safe Lock Servicing.
6/1	Colorado Springs, CO	Safe Penetration, Group 2 Safe Lock Servicing, Complete Auto Lock Workshop, Codes & Code Tips.
6/8	Baltimore, MD	Safe Penetration, Group 2 Safe Lock Servicing, Auto Lock Workshop, Codes & Code Tips.
6/22	Detroit, MI	Complete Auto Lock Workshop, Air Bags, Car Opening, plus others to be announced.
8/18	Oklahoma City, OK	Car Opening, Safe Penetration, Group 2 Safe Lock Servicing, Codes & Code Tips.
9/5	Philadelphia, PA	State Of The Industry
9/15	Syracuse, NY	'96 Ford 8-Cut Locks, GM 10-Cut Locks, Car Opening, VATS Servicing, Alpha-Tec Ignition Locks.

Locks, General Motors 10-Cut Locks, Car Opening, VATS, Air-Bags, Alpha-Tec Ignition Locks, Master Keying, I-Core Locks and many more to come. All seminars are sponsored by The National Locksmith and will be taught by instructors such as: Bill Reed, Steve Young, Mark Miller, and Jerry McNickle to name a few. The following is a list of the latest

scheduled dates and topics offered. As always, there is no charge to attend any of the seminars.

For more information or to book a seminar call:

Bill Reed
Security Resources, Inc.
(904) 476-2799



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Alarm monitoring



Keith Fisher of Keyth Security, Inc., Tells us why its a good choice for locksmiths

By Jonathan Bean

"Many locksmiths are plain afraid of spending two to three hours on the presentation of an alarm proposal that may be rejected. There's a spoiled mentality based on getting jobs immediately with no long-term sense of business planning. But the fact is, the demand for electronic security is rising, it's not going away. In fact it is mandatory for locksmiths to get involved in it if they are interested in coming into the nineties and are interested in moving beyond just the labor of locksmithing." So says Keith Fisher, President of Keyth Security, Inc. in Deerfield, IL. Keith's 20 plus years in every facet of the industry makes him eminently suited to speak on the subject.

Fisher, 38, got involved in the electronic side of the industry over 20 years ago, at a time when it was in its infancy. As people asked him for assistance regarding alarms, he began experimenting with every electronic component available. "It was all unproven technology and it was a long and painful learning curve." Today, two thirds of his employees and two thirds of his gross dollars are involved in a stem from electronic security.

"The importance and relevance of electronic security is apparent because requests for it only increase. Therefore, being on the front line of the physical security business, it is obvious that if someone is determined to break into a house, there are other methods of deterrents that are mandated, because locks alone cannot do the job."

"Nowadays, the skills necessary for this facet of the business are honesty, a strong work ethic, a commitment to customer satisfaction and good

basic tool skills, the level of technology has replaced many of the old fashioned skills and methods. Installation in even the largest home can be done in less than one day if you choose a high quality wireless system. \$500 - \$800 worth of basic and spreadsheet tools and a good head on your shoulders are all that is necessary," according to Fisher. "Understand that the large conglomerates have figured out the price game and newcomers can never hope to win, however, they (the large conglomerates) can't compare in the realm of personal service and trust that the local locksmiths have developed with their clients."

There is a lot of money to be made in electronic security and while the profit margins, on labor and material, are little more than a fair exchange because of the competitive nature of the market, the residuals from monitoring and service contracts are very large. For example, once you have installed an alarm, you should be able to keep that client for six to ten years. The current monitoring rates are between \$20 to \$25 a month on services which cost you between \$6 to \$9 per month. Keith also suggests additional service maintenance yearly contracts be sold. As your client base increases, these residuals will

Continued on page 68



1. Keith Fisher by a couple of his eye catching service vehicles.

Continued from page 66

generate very significant cash flow for any locksmith shop getting involved in the business.

So while there is far more responsibility for someone entering the field, one can develop long term relationships with clients leading to greater job and income security. Another benefit of electronic security is that material is readily available from distribution or direct from the manufacturers. Around \$2000 in inventory would be sufficient for the average shop to participate in this business.

Fisher recommends: subscribing to the major trade journals, attending the trade shows and getting involved with a manufacture that provides a high level of service, training and telephone support. It is critical to install the best systems and materials available to avoid false alarms, call backs and other drains on your resources. There are relatively few manufacturers who are really set up to provide the training and support necessary for the small locksmith, although things are changing. Once you decide on the manufacturers' product line, push them to the max for guaranteed support from your local rep as well as factory support.

Fisher recommends having the manufacture's rep help you install and design a system in your own home and business. After five to six installations for family and friends, you are ready to promote yourself as a professional security alarm installer. Most manufacture reps have installation skills.

Don't regard this as an add-on to your product line. Train at least one technician to be full time in this area and be prepared to respond immediately to phone calls. When responding to an alarm, you will need immediate access through a computer to a client database so that you can know what type of system the client has. The computer can come later although after 50 or so clients it will be a welcome need. In fact, Fisher has designed a Macintosh data base to assist his operations.

Many states do not have licensing requirements at this time so Fisher recommends getting into the business as soon as possible. Licensing regulations, such as in Illinois can be very strict. However, it is possible to form a strategic partnership with a local alarm company for commission on sales if you don't want to be involved without starting your own division.

Keith Fisher is available on a consultant basis to help locksmiths get into the electronic security business. He can be contacted at: (847) 433-0000. **IRL**



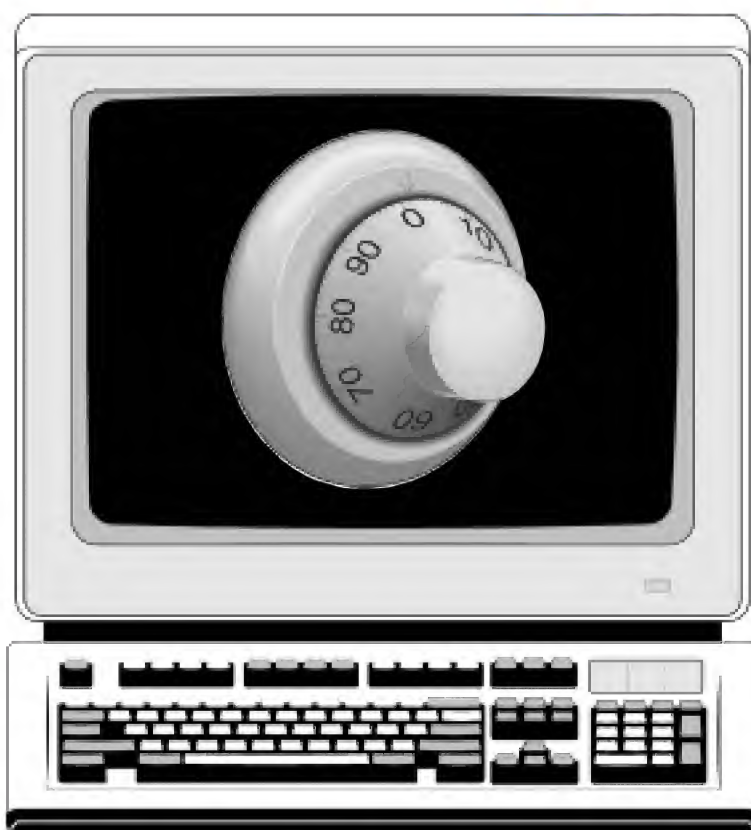
2. A solid locksmith business eventually incorporated alarm service as well..



3. Fisher recognized the need to advance into the electronic security business.



SOS SAFE OPENING SIMULATOR



Rather than
practicing on a
customer's safe,
practice at home
and reduce your
liabilities

Safe opening simulator (SOS) is an Educational software program designed by Moore Software Development. It is one of the first software programs of its kind that I have come across for the theory and training of opening safes.

Whether you are a novice or an experienced safe technician, SOS is designed to be a user friendly program. In understanding the workings of safe lock terminology, SOS is a Windows based program, designed to simulate different safe problems you may encounter. Stuck fly, numbers running off, stuck lever, broken drive pin, unlocked wheel, and a lost combination just to give a few examples.

As you enter the tutorial, you will encounter lessons 1 through 7

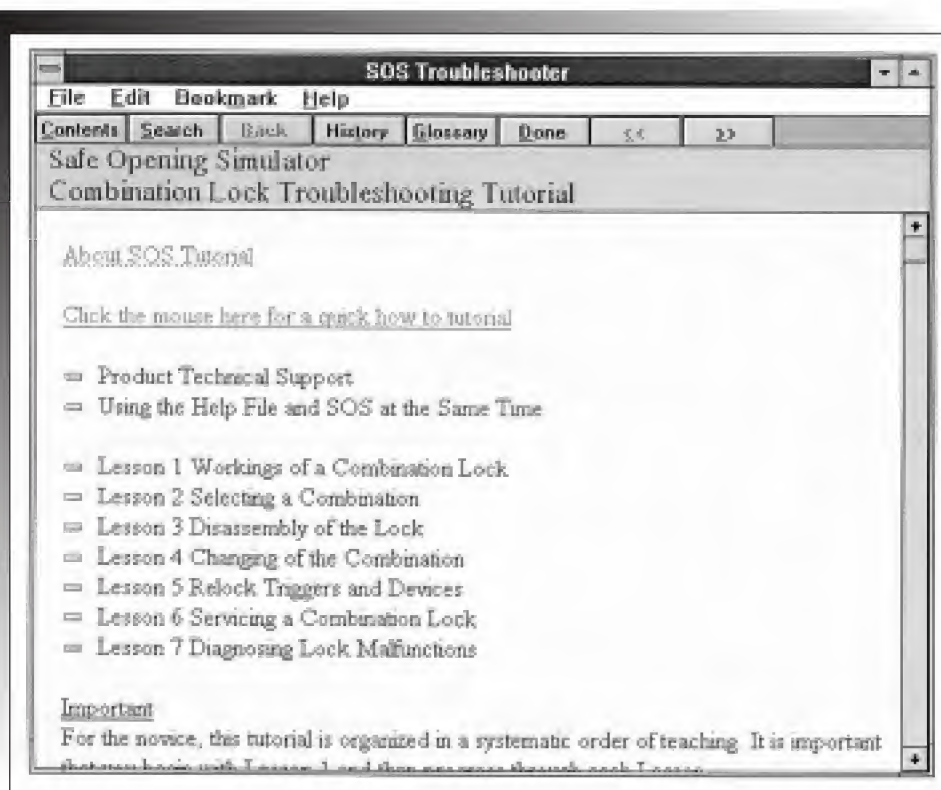


by
Larry Hughes

for the novice. The tutorial is organized in a systematic order of teaching. It's important that you begin with lesson one, and then progress through each lesson. As you progress throughout the lessons, you will encounter vast amounts of information to absorb. Just remember to take your time. Your computer is the teacher and you are the student. You may, at any time, exit the program and return to the tutorial. (See illustration 1)

Some of the information that will be covered, as you proceed throughout the lessons will cover nomenclature of parts, lock theory, dialing procedures, and diagnosing lock malfunctions.

Diagnostics may be one of the most important tools any



1. The SOS Troubleshooter tutorial window offers lesson help.



safe technician can have at his disposal.

Knowledge of diagnostics taught with this program will increase the safe technician's speed in opening any container.

Lock lubrication, disassembly of a safe lock, procedures for removing a broken spline key, as well as a lesson on removing a safe dial and the correct usage of an emergency dial are just some of the servicing necessities covered in the program.

Now to get started

From the SOS program group, double click on the SOS icon. If you are a novice or an experienced safe technician, I would recommend that you start The SOS Troubleshooting



2. The main window showing lock status information.

Tutorial by opening the help menu and selecting Troubleshooting Guide.

Navigating throughout SOS is a very simple process. When entering the program, there will be a three dimensional picture view of a safe. To the left side of your computer screen along the top will be a lock status window where you will be asked to

identify what type of safe, it's manufacturer, lock manufacturer, lock group, lock hand, and UL rating. (See illustration 2)

All the answers are located on the screen. You will be able to scroll up and down the safe specification window and pick and choose. The computer will indicate data that is input incorrectly, allowing you to make changes.

After I completed my tour through the tutorial, I was ready to open my first computer simulated safe. The first thing I did was to proceed to the troubleshooting setup and decide which simulated lock problem I would like to solve for my first opening. I had a choice of picking one or to allow the computer to pick

Continued on page 72



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Continued from page 70

one for me at random. I chose to simulate a lost combination. (See illustration 3)

The next step was to identify the safe model, manufacturer, lock handling, lock group, and the lock manufacture. You will be given three chances to find the correct answer, after the third try the SOS program will inform you of the correct answer. Note: Keep in mind that some older model safes may use one brand of lock and newer models may use another.

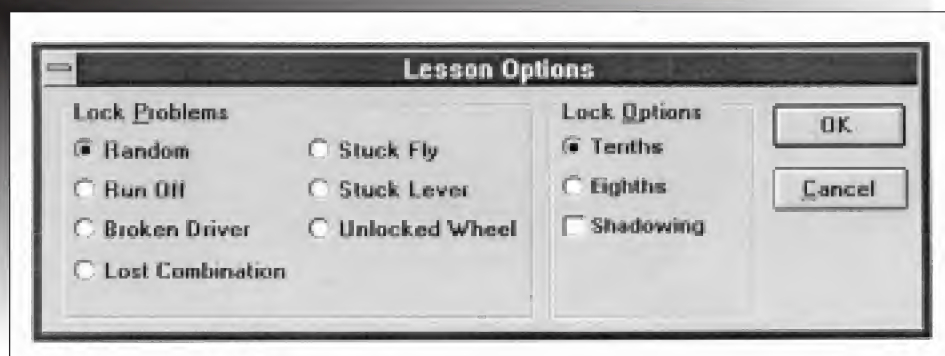
The safe that (SOS) had chosen for me to identify was an Amsec model BLB 3018 Class B. The lock manufacture was Sargent & Greenleaf model 6730, the lock handling was vertical down (VD) on a right handed door. After I successfully identified each item, I was able to proceed to the lock status window and select my tools to remove the dial and dial ring.

All of the tools are supplied within the program toolbox that is located to the right of the screen. You will find an assortment of tools to work with from this window. It displays the dial tracking, which gives a digital display of the location and direction of each wheel.

You will have a dial control which will allow you to rotate the combination dial left or right.

The next set of tools that are simulated is a hammer, a drill distance indicator, and a tool to set the drill angle.

The most important tool is a straight light which is a simulated safe



3. The Lesson Options window allows the user to simulate the desired lock problem.

scope and a prybar. Everyone needs a prybar when opening safes you know.

The first tool that I had chosen to use was a computer simulated crowbar to remove the dial. As a professional safe technician in the field, the crow bar would not have been the tool of my choice on removing a safe dial. I would have used a slow puller or a slap hammer type of dial removal tool. Unfortunately, neither of these type tools are simulated in the program.

After taking my measurement at 72 x 1" and drilling my hole, I came out right at the fence. My options at this point were to drill off the fence or dial the spindle and line up the gate under the fence. When drilling for the fence, be very careful that you don't drill the lever in half. This will put you into a very sticky situation.

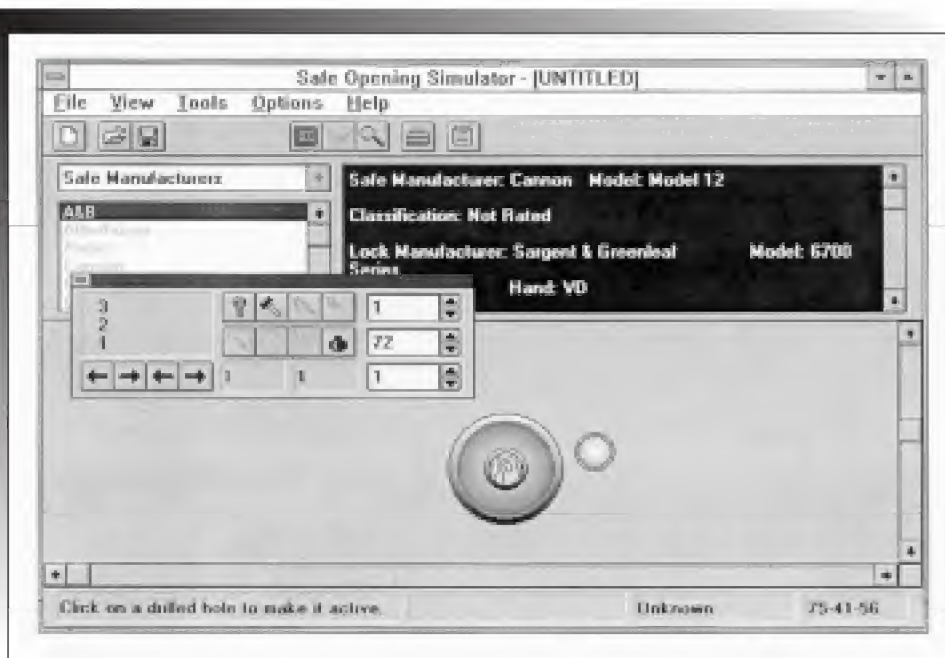
After drilling my hole I was able to line the wheel gates under the fence and dial my safe lock to the unlocked status.

As any safe technician would tell you, safe manipulation would be the first choice on attempting to open any safe. That option however, is not offered.

All in all I had found the Safe Opening Simulator to be a beneficial training aid and an enjoyment to use.

The system minimum loading requirements are:

- IBM AT, 386, 486, PS/2 model 25/30, or 100% compatibles.
- VGA minimum 640x480x256
- Minimum of 10 Megabyte hard drive disk space
- 4 Megabyte RAM, 8 Meg recommended
- Windows 3.1 or higher
- Microsoft mouse or compatible



4. The main window with status information and a drilled hole to the right of the dial.

After removal of the dial, I chose the screwdriver to remove the dial ring. With the dial ring removed, a view of the spindle will rotate to a frontal view to simulate the face of the safe container. My next step is to measure for my drill hole.

As you remember, the safe lock we are drilling is a Sargent & Greenleaf

Safe Opening Simulator may be purchased through
Pacel Corp:
(703) 257-4759
Dave Calkins



The **Lighter** Side

Moving Experience



by
**Sara
Probasco**

"This is absolutely, positively, without question the last time I'm ever going to move or remodel our locksmith store!"

Don was serious, but I couldn't help thinking, "Famous last words." If there's one thing I've learned in life, it's never say never. Besides, I seem to remember him saying something like that when we moved to Uvalde, ten years ago and again when we expanded and remodeled a couple of years back.

I covered my ears, as loud banging and hammering on the wall separating our present store from our future location grew louder and louder. Suddenly, the head of a sledge hammer crashed through, bringing a chunk of sheetrock with it.

"Good grief!" I said. "What are they doing?"

Don glanced nonchalantly over his shoulder at the workmen. By now

they had bashed a huge hole through the wall.

"We decided it would be easier to go through than around," he said. "They take out a section of wall, we slide all our work tables and key boards through the hole to the other side, then they patch the wall and finish painting. Pretty smart, huh?"

That wasn't the only smart move Don and the guys had come up with. They had decided to remove the entire section of wall on which our solid brass entry hardware display was mounted and move it, intact, into the new store.

"A piece of cake," Don said when my mouth dropped open at the thought.

"But what's that going to do to the wall?" I asked.

"The new tenants won't care. They're planning to tear that wall out anyhow. This will be a lot easier than

taking down all that hardware, unstapling the brown velvet backing, and having to put it all back up again in the new store."

"But"

"Don't worry about a thing. The guys and I have everything all figured out." Smiling smugly, Don went up front to wait on a customer.

That night, I dreamed we were tearing down display walls and cramming everything through the hole in the wall, and it was all disappearing into the vast unknown on the other side. I

awoke, still terrified at the thought, but as the day wore on, I began to think having everything disappear might be better than having to move and reorganize everything in the new space.

"Heave!" Don called to the guys, bringing my thoughts back to reality. With their shoulders to one of the free-standing key-board walls, they gave a mighty shove. The wall didn't move.

"Heave!" he called again. From the tone of his voice, I half expected to see a cat-o-nine-tails gripped in his hand.

"Don," I said softly.

"Don't bother me now. We're busy," he snapped. "Heave!"

"But, Don," I whispered, "did you remember to unbolt it? Remember, we screwed all of these wall units into the floor for stability?"

His stern expression and stance never changed, but his glance darted to the base of the key-board wall. There at the edge gleamed one of the big-head floor screws, still firmly in place. Don cleared his throat.

"Hold on there a minute, fellows," he said. "I've just thought of something that might make this easier. You guys take a ten minute break and let me see what I can do."

Once the guys were out of sight, Don whipped out his screwdriver and began to loosen the floor screws, grumbling unintelligible phrases as he worked.

In a few minutes, the guys were back. This time, when they put their shoulders to it, the key board miraculously glided across the floor, through the hole in the wall, and into position in the new store.

"What did you do to free it up?" one of the men asked Don.

"It's all in knowing how," Don replied, grinning. "Like we tell some of our customers about opening their locks, it's magic!" He anxiously cut his eyes over at me.



Continued from page 74

I smiled sweetly and kept my mouth shut, for a change. I had already decided it would be best not to remind Don that the very same thing had happened two years ago when we remodeled the store and moved divider walls around. Some things are better left unsaid.

About that time, we heard a crashing sound from the back room. Then one of the guys yelled, "Oh, no!"

In trying to move one of the shelf units by himself, he had shoved it sideways. That's when it got away from him and tipped over. Crushed cardboard boxes lay beneath the

shelves, their contents - a melange of key blanks - were scattered across the floor.

"Education time," I said, trying to seem cheerfully sympathetic. "What a great opportunity to test your skill at identifying key blanks."

"You've got to be kidding," he said.

"Nope. Get that dishpan from the sink area and pile all these key blanks in it. While you do that, I'll get some tape and fix the boxes. Then you can start sorting out the keys and putting them into the right boxes."

"But that could take all year!" he wailed.

"Could be," I replied. "But I guarantee you'll know your key blanks by the time you get through sorting them all."

Just so he wouldn't think I was being mean, I told him how something similar had happened to me when we first moved to Uvalde and opened shop here. I had never worked in locksmithing before, except to field telephone calls for Don, so I had a lot to learn.

The movers unloaded in the rain, and stacked the wet boxes in a corner of our store. As we also had household goods to unload, we decided to get the house straightened out first and return to sort through the business boxes after the weekend. However, by the time we got back to the shop, the wet boxes had split, the cardboard key boxes inside had split or crushed each other, and thousands of keys had dribbled out onto the floor in mixed piles.

"I'll say one thing for the experience," I admitted to our employee, "I've been pretty good at identifying key blanks, ever since."

Just then, Don came stalking through. "Never again," he muttered. "This is absolutely, positively the last time I will ever move our locksmith store!"

"Oh, I don't know," I said. "Maybe it's not a bad idea to move every once in a while. You know all the things we've lost, through the years?"

I held up a pair of bifocals that I'd finally replaced, an old checkbook that we'd stopped payment on two years ago, Don's prized pocket knife that he'd looked everywhere for, and a whole box of odds and ends we'd thought were gone forever.

"Well, well. Looks like you found the gremlin's hide-out."

Don's face sobered. "Maybe you should hide this stuff somewhere in the new store."

"Why would I want to do that?" I asked.

Don had a twinkle in his eyes. "So they'll move with us. After all," he whispered, glancing about to be sure no one else could hear him, "if we don't have gremlins, who can we blame when we can't find things?"



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by
Jake Jakubowski

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- Major Mfg. Products
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My granddaddy always told me that when I made a mistake or did something wrong, I should, "fess up and take the consequences." Sometimes "taking the consequences" from Grandpa, would tend to make a fellow shy away from telling the truth about the matter. However, when I gave it enough thought, 'fessin up' was generally better then fibbing to him since - as somebody once said - "his wrath was awesome to behold" (Or, in my case, to feel!) In this case, my 'fessin up' isn't going to bring a willow switch whistling across my legs, so I'll tell it as straight as I can. Quite often, folks that have won monthly prizes through this column had to wait an inordinate amount of time to get their prize. Mostly, that's my fault since I'm responsible for seeing that the shipping labels are done, and the prize list is ready so the prizes can be packed and sent on their way.

For the last couple of months, I haven't been as prompt getting the lists done and the prizes down to the end of the lane so the Big

Brown Truck could take them. Beginning this month, I'm going to try and have everything shipped by the first week of the month, so that almost as soon as the winner sees in the magazine he or she won a prize, the prize will be on their doorstep! Now, there is one little catch to that. On occasion, I am caught between a rock and a hard place and temporarily run out of prizes. When that does happen, I'll still send your Locksmith Bucks, folding pliers and other good stuff, along with a note explaining the delay. When the prizes do come in, I'll get them right out. Scout's honor!

If I may add one more thing. If you want to qualify for a great year-end prize, you need to be thinking up some ideas and writing them down. You can send them to me by U. S. Mail, E-Mail, Fed-Ex or Pony Express. So get cracking and let me hear from you. After all, what have you got to lose? Like Gran'paw used to say: "You can't catch no fish 'iffin ya' don't bait the hook!" How true it is.

All Lock Service Kit Winner **Yale Cylinder Replacement**

I just had my first experience with a Yale AU5400, series leverset with a store room function. The customer said the lock - which was master keyed - had been serviced several

times in the past year and would work for a day or two and then begin to "act up." By "acting up," they meant neither the master key or the change key would operate the cylinder. I suspected that the spring retainer was loose. Since I could not get either key

to work and was unable to pick the cylinder, I decided the only way to get to the cylinder was to take the lock off the door. After removing the inside lever, rose sleeve, rose, inside rose assembly, sleeve nut and inside rose plate, I finally had the outside lever assembly in my hand!

I was finally able to get the key to work by placing the lever on a block of wood (see *illustration 1a*) and gently tapping on the inside of the lever shaft (The part that fits over the spindle) with the wooden handle of a small hammer. By gently turning the key

while tapping on the shaft, the vibration caused the pins and springs to align at the shear line. I then turned the plug to the point where I could remove the lever by depressing the retainer.

Once I had the cylinder in my hand, I found that the problem was caused by a loose spring retainer. The spring retainer came loose because whoever had serviced the lock previously, had not properly re-staked the retainer so it was secure. In fact, the top of the cylinder had been totally mangled from previous attempts to

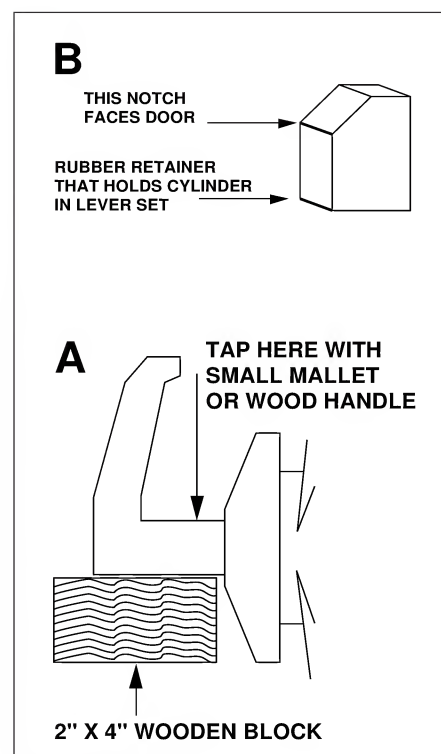


Illustration 1

stake the retainer. Apparently the person who serviced the cylinder removed the retainer to do so and was unable to get it back together without damaging the bible. The resulting damage meant a new cylinder was needed.

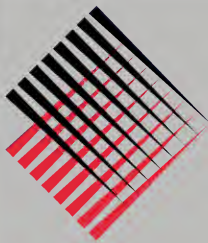
I had an 1801 cylinder for a Yale key-in-knob, but did not have an 1802 for a key-in-lever. The difference is: the tail-piece on the key-in-lever cylinder is held to the plug with a roll pin and the key-in-knob tail piece is held to the plug with a spring retainer. What I did was remove the plug from the ruined cylinder, re-pinned it to both keys and inserted the plug in the 1801 housing. Since the housing turned out to be the same, it worked! And, with the "new" cylinder in the lock, the customer's problem was solved.

One other tip about this Yale, key-in-lever, lock. There is a small rubber retainer that holds the cylinder in the lever. That retainer has an angled edge to it (see *illustration 1b*). That angle must face the door or you can't get the lever back on the shaft.

Thomas Crowfort
Idaho

American Lock And Supply Winner A Freezer Lock Alternative

Last year you wrote an article on cross-keying I-Core padlocks ("Puzzles, Padlocks, and Profits" *THE*



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NATIONAL LOCKSMITH, March, 1995, Page 49) on a given system so that when the perimeter doors were issued new cores, you did not have to change the padlock cores and consequently saved your customer money. At the same time you added to your sales by selling them padlocks and cores. I thought it was a good idea and gave it a try. It worked just like you said in the article. I then added a twist of my own.

One large building that my company services has a cafeteria with six entry doors and two service doors that have I-Core on them. The manager readily accepted the idea of using I-Core padlocks (keyed as you suggested) to secure various freezers. Later he called me to ask if I thought we could put the same type of padlocks on a number of cabinets and storage lockers. The only problem that I saw was that the cabinets were fairly expensive and having hasps, hinges and padlocks hanging from them might look a bit tacky.

I suggested that they use Olympus Sliding Door Locks (Part #722) and some Olympus #7211C Door/Drawer Locks. Using these Olympus locks gave the entire installation a professional appearance and did not look like an after-thought that padlocks and hasps would have.

I keyed the Olympus locks just like the padlocks. That is, I pinned only the three chambers that were compatible with the three chambers being held in the system for the doors or perimeter locks. The system I'm using in this area holds the first three chambers and varies the last three. All the keys issued for this system would operate the padlocks and cabinet locks if you do not pin the last three chambers, even when the perimeter doors had to be re-cored.

SAMPLE BITTING CHART:

KEY #1 - 171220

KEY #2 - 171420

KEY #3 - 171620

KEY #4 - 171820

KEY #5 - 171222

KEY #6 - 171422 ... and so on

I hope this idea helps another locksmith servicing I-cores to sell some extra locks and cores even if they don't get the rekey fee for the auxiliary locks each time the perimeter doors are changed.

Ann Wheatsford
E-Mail

Sargent And Greenleaf Winner Lock Case Drill Template

I was asked to open a floor safe for a convenience store when the previous manager had been terminated and would not tell anyone what the combination to the safe was. The supervisor wanted to know if I could open the safe without destroying the door, I told him I would try.

The only markings on the square door of the safe was on the dial which indicated the lock to possibly be an S&G 6730. There was no manu-

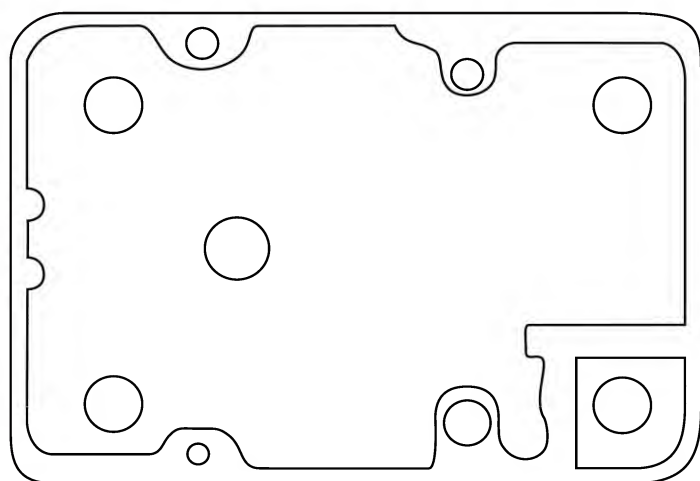
facturer's name on the lid, but the door resembled a Gardall square door. I tried manipulating the lock without success and decided that the only course of action was to drill a scope hole.

Although I was not certain of the make of the safe, I assumed that the lock was mounted RH, and that there would be hard plate. Both assumptions proved correct. To drill a scope hole without going through the hardplate, I decided to drill for one of the mounting screws that held the lockcase to the lid. I thought that by



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SARGENT & GREENLEAF R6730

Illustration 2

drilling out the screw (which I figured had to penetrate the hardplate) I'd have a good scope hole into the lock case. To do this as accurately as possible, I used an old 6730 case that I had on the truck. I aligned it like you see in *illustration 2*, and drilled a 13/64" hole in the lower left hand corner of the lock. As it turned out, I was dead on the money. As the drill caught the mounting screw, it

automatically backed it off into the lock case.

When I inserted my scope, I had an excellent view of the wheel pack and simply dialed the gates into view and transferred the numbers to the drop-in. The entire opening took about an hour (including the manipulation time) and the repair was easy enough to do. Besides, I saved the customer the cost of a new lid. I still don't know

the name of the safe lid manufacturer but I do have a happy customer.

John Hipplewhite
Massachusetts

Silca Key Blanks Winner
Strike Plate Solution

I install a fair number of locks on steel doors with concrete filled frames. Because of the difficulty in drilling or tapping holes in the frame to receive the latchbolt or to attach a strike plate, I have often simply drilled a one inch hole in the frame, cleaned out the concrete with a chisel and hammer and simply made sure there was no rough edges sticking out to snag someone's clothing or cause a cut to curious fingers.

However, I always felt that this type of installation lacked a "professional finish" and simply did not look right. Here's what I now do to make the job look finished and neat.

If there is enough clearance between the frame and the door edge, I use a Dremel tool with a fiber-glass/carborundum cutting wheel to cut out a square hole for the bolt or latch to recess into (*see illustration 3a*). I then mount the strike plate by drilling a 3/16" hole almost through the steel. Just about the time the bit is ready to break through the jamb, I switch to a 3/16" concrete bit and continue to drill into the concrete about an inch and a quarter. Using a Pop-Rivet tool, I mount the strike plate to the door jamb.

If there is inadequate clearance for the strike plate to be surface mounted, I use my Dremel Tool to cut out a rectangular opening large enough to accept the plate as a "flush mount." At this point, I do not cut the concrete out of the jamb to accept the latch or bolt of the lock that I'm installing. What I do now is mark the location of the two holes in the strike plate and drill a 3/16" hole to accept a plastic anchor. Next, I screw the strike plate to the anchors (*see illustration 3b*).

The next step in the flush mounting of the strike plate is to use a 3/16" concrete bit to drill a series of holes into the concrete - using the strike plate's opening as a template - all the way around the opening of the strike plate. I usually drill these holes about an inch to an inch and a quarter deep. Then it's simply a matter of cleaning out the concrete with a small chisel or an old screwdriver blade.



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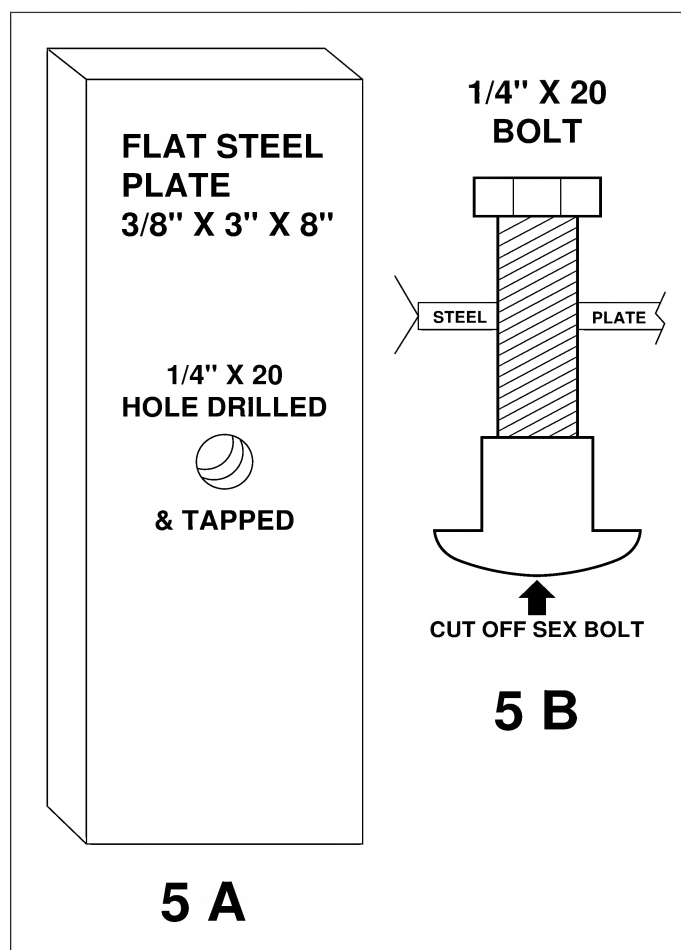
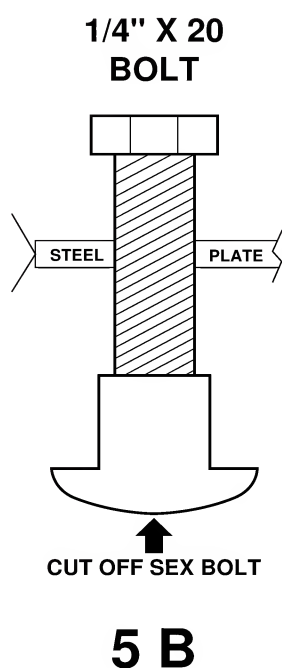


Illustration 5A & 5B



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whole experience off, I found my LaGard change key on the motor cover of my van, just where "Murphy" put it the last time he used it!

Timothy Johnston
Massachusetts

*Seiveking Products
Gm E-Z Wheel Puller
Winner
**Wheel Puller
Pinch***

My brother had broken his wheel puller and came over to borrow mine for the day until his new one arrived from a supplier down state. He wasn't gone ten minutes when the phone rang and the caller told me he needed a set of keys for a 1986 Chevrolet!

Not wanting to lose the job, I told the customer I would be there within the

hour and immediately began rummaging through the shop to find something to pull the wheel with. Using a piece of flat 3/8" plate steel three inches wide and about eight inches long, I drilled a 13/64" hole in the center and tapped it to accept a 1/4 X 20 bolt. (Illustration 5a) After threading the bolt through the plate, I used a 1/4 X20 sex bolt that I had cut down to 3/4". (Illustration 5b) This was to act as a buffer between the bolt and the tip of the steering column shaft to prevent possible damage to the shaft.

With my home-made wheel-puller, a roll of duct tape and a couple of pieces of cardboard, I was ready to tackle the GM wheel in my customers car.

After removing the horn pad, safety clip and steering column nut, I laid my wheel puller over the shaft and aligned it with the spokes of the steering wheel.

Next, I used my pocket knife to cut two strips of cardboard about 3" X 6" and wrapped the cardboard around the wheel's spokes and the puller's ends. I secured the cardboard with five or six turns of duct tape on each

side. The cardboard was to keep the tape from sticking to the steering wheel.

Once I had everything in place, I began to tighten the bolt down while applying pressure on the steering wheel. Although the tape allowed a lot of play in my puller, the wheel came loose and I was able to lift it off the shaft and service the ignition in the normal manner. My biggest concern was possibly breaking the wheel spokes or cracking the plastic housing around it. Apparently with the cardboard acting as a cushion and the flat steel plate laying firmly on top of the cross arms, damage was avoided when I very gently applied pulling pressure to the wheel. Regardless, I was happy to get my puller back from my brother when he received his from the supplier.

Jesse Ward
New York

*Pro-Lock Professional PK-15 Pick Set
Winner
A Spiral Extraction*

Responding to a call from a customer who had broken their key off in the entry lock of their home, I found that the wrong key had inadvertently been jammed into the lock. Trying to remove the broken key with extractors proved fruitless. Not wanting to drill the cylinder of the lock, I decided to try one more trick to remove the jammed key from the keyway. I used a 3/64 bit to drill a hole about three-quarters of an inch deep in the widest part of the key blade that was visible. Then, I threaded a spiral type extractor into the hole, making sure that I had a good tight fit. Next I clamped a pair of needle-nosed Vise-Grip pliers to the end of the spiral extractor and began to firmly and steadily pull on the Vise-Grips. At the same time, I lightly tapped the top of the Vise-Grips with a small mallet. Although the key remained firmly in the keyway, I finally extracted the broken key. It turned out that the key was a Kwikset and the lock was a Schlage. When I asked the customer how they managed to get a Kwikset key into a Schlage lock, he told me he thought the lock had ice in it so he used a neighbor's hammer to try and "break through" the ice! Don't you just love do-it-your-selves.

Kevin Martin
Alabama

TNL

ADVENTURES IN LOCKSMITHING



By Ginger Talasco

Ever have one of those days? Or, worse yet, ever have one of these days?

I'm so grateful for all the help I've gotten from other Locksmiths in the short time I've been in business. Should a customer ask for a service I'm unfamiliar with, I make a point of referring them to someone more experienced, rather than damage somebody's property or make a fool of myself. Not that I haven't made mistakes, but fortunately nothing too serious, and the next time, I get it right.

However, last Sunday... I still can't believe how a simple, uncomplicated, little job turned into.... well, would nightmare be too strong a word? I'll let you be the judge.

A lady for whom I had installed a Kwikset deadbolt a few days earlier for, called and said she'd lost both her new keys. The good news was, she wasn't locked out. All I had to do was rekey the cylinder. What could be easier? What could possibly go wrong?

When I arrived at the residence, I was greeted with, "You're a Doll. Let me pay you now because I'm on my way to a wedding, my ride'll be here any minute." And sure enough, the sound of a horn, honking from the street below soon flooded our ears. "Just leave the keys in my box in the lobby, OK?"

Quickly, she paid me, insisting I take an extra \$20. I was about to give her one of the new keys when she said, "Dumb me! I dropped the old keys down the sink. Wasted an hour trying to fish them out" She said as she headed for the stairs.

Still holding the key I'd intended to give her, I turned toward the kitchen. From where I was standing, I could see a flash-light and a twisted coat hanger on the counter next to the sink.

Now be honest. Is there anyone reading this who wouldn't have said to

themselves as I did. "Let me just take a quick look."

Sure enough, I could see the tips of the keys. And, as I tried (with no more success than my customer) to fish them out, I heard a little voice in my head say; "Ginger... Quit wasting time with that wire and open the trap."

"ARE YOU CRAZY?????" A second voice shouted back. "You know what happens whenever she gets involved in plumbing!"

Voice 1: "Who's getting involved? You call opening a trap 'getting involved?' Big deal! - Ginger, just get the channel-locks."

Voice 2: "NO!...NO!...NO! If she even touches plumbing, something will go wrong."

Voice 1: "Oh please... Give me a break!" (Quickly, Voice 2 runs films of past plumbing disasters. One in particular of old pipes falling apart as I struggle to open the trap under my own sink!)

“Well, I’ll just have a look” I said, conceding to Voice 1. Opening the cabinet, I found the pipes in good condition. Closer inspection convinced me they were quite secure... I got the channel-locks.

“Wait!” Ordered Voice 2. “Spray the plug with WD-40!” (I sprayed)

“Wait!” Cried Voice 2, a second time. “Find a pan to catch the water!” (A pan was found.)

“Wait!” Voice 2 ordered again. “If that plug shows any resistance, any resistance at all, JUST LEAVE IT ALONE!”

But the plug unscrewed easily, and along with a little water, “PLOP” out dropped the keys. The plug threaded back on as smoothly as it had come off. When it was snug, I emptied the pan and turned on the water to check for leaks, there were none. All was dry. All was well. I dried off the keys, returned my channel-locks to my tool box and that was it. I was done. It sure was a great feeling to know I’d touched plumbing and for once, and nothing had gone wrong.

I looked in my tool box which, at that point, still seemed filled with potential solutions.

I guess it was the wish to re-experience that great feeling that led me to turn on the water one last time. (Both faucets...full force.) No problems. Pipes were still dry. I knew they would be! Confidently I stood up and with a firm twist shut off both knobs.

Perhaps a little... too firm. The COLD caught in the OFF position for just a second... and then...it spun.

“Don’t panic,” I warned myself.

“I knew it,” whined Voice 2.

The stem screw was tight and rusty. After a few attempts with my favorite screw-driver (you know, the reversible one with the pretty blue handle) it was stripped as well. I reached for the drill. It took a pretty long time to drill the screw out, but that was OK because I needed time to figure out what to do when I did get it out.

Plan A - use plastic screw anchors. It seemed like a good idea since I had a bunch of them, in different sizes, in

my tool box. But the small ones wouldn’t fit over the stem. The larger ones, on the other hand, were too big to fit in the holder, even split in half. And the middle-sized ones didn’t fit anything.

I looked in my tool box which, at that point, still seemed filled with potential solutions.

An hour, as well as various plans, went by.

Plan F was obviously not going to work so I proceeded to Plan G, which (and there’s really no need to go into details) caused the valve stem to snap off!

OK, but there was still no need to panic. I knew two hardware stores that were opened on Sunday. Fortunately

the faucet was “American Standard” so it would be easy to find.

Now why did I think that? Well, because of the name and what it implies.

American - something made here, not some import thing.

Standard - well come on... that means usual or the most common. Something used regularly by everyone. Right?

I could just imagine some poor devil going from store to store asking for some little known brand and hearing, “Sorry, all we carry is “American Standard.”

First hardware store: “Sorry, don’t carry it. Try a supply house.”

Continued on page 106



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Continued from page 103

But wait! Why hadn't I thought of it before? One of my favorites for locks and key blanks also carried a full line of plumbing supplies. And best of all, they were opened on Sunday! (Only until 1p.m., But I could make it if I hurried.)

I'm sure anybody from the New York City area knows I'm referring to a place in Brooklyn called Right Way. And I'm also sure they'll agree it's a great place to do business. Not only are the prices good, but the people who work there really go out of their way to give the very best service.

When I arrived (about 5 minutes to 1) and saw there was no way I could get into the parking lot (everybody else was pulling out and blocking the entrance) it was no surprise to me that one of the employees noticed me and called to me from across the lot.

"You're kinda late today," he shouted (or something to that effect it was hard to hear with all the noise from the engines).

"I know," I called back, "but it's an emergency, I just need one thing."

"Stay there," he instructed. "What'd you need? I'll get it for you."

"American Standard valve stem," I yelled. He cupped his hand around his ear to indicate he couldn't hear me. I repeated my request as loudly as I could and this time he nodded and started inside, only turning to call back to me, "You want the long or short?"

"Oh no!" I groaned, as I stared down at the two very familiar red, white and blue rectangular shaped boxes

(As if I really knew!)

"I'll take one of each," I said, not wanting to take any chances.

In no time at all he was back, putting a bag through the passenger side window on the seat beside me. "Thanks a million!" I said gratefully.

"No problem," he assured me and hurried back inside.

I sure was lucky. Ten minutes later and they would have been closed. I headed back toward my customer's building, admittedly driving too fast. No, I didn't have an accident. But I

might have if I'd gone through that red light I almost didn't see. Fortunately, I slammed on the brakes just in time. Unfortunately, the bag slid off the seat and hit the floor with a heavy thud.

"Oh No!" I groaned, as I stared down at the two very familiar red, white and blue rectangular shaped boxes. Who could blame the man for misunderstanding? "American Padlocks"... I always buy "American Padlocks." But now what...? Was now the time to panic? No, not yet, because I knew a plumber who owed me a favor and I knew where he lived.

Fifteen minutes later I was ringing his bell and hoping his wife who bore a strange resemblance to one of the characters from the "Wizard of Oz" wouldn't be the one to answer the door. She wasn't. Instead, she screeched down at me from an upstairs window, "He ain't here and he don't work Sundays!" she replied.

"I owe him some money," I lied.

"Yeah, well he's at the shop takin' inventory," she informed me before slamming down the window.

Continued on page 108



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Continued from page 106

Sure enough, his van was in front of the shop. The gates were up but the door was locked. Only a dim light shown through a doorway in the back. I was about to knock when I saw a curly blond head peek around that doorway and then quickly disappear. (Obviously, my friend, the plumber, had company.) A picture of his "lovely" wife came to my mind and I just didn't have the heart to disturb him while he was busy with "inventory."

Besides, I knew one more place to look! (even though it would be a big hassle) - My basement.

I fought my way through, over and under piles of junk, and this and that, to a heavy wooden box filled with bits and pieces of plumbing stuff. But I was rewarded. For there at the bottom, nestled in a corner, was an "American Standard" valve stem.

Back at the lady's apartment, I was ready to complete the job... Guess what? NO CUT OFF VALVE! Impossible! In the bathroom? Yes. But none for the sink!

Oh, and if by chance any of you men reading this are wondering if there were perhaps speedy connec-

tors, yes there were. And yes, I know exactly what you "guys" would have done! But let me say right now, they can say what they will about men and women being equal and all that stuff, but I know there are some things that men, and only men, are able to do with great ease. Whereas if a woman attempts them, disaster is sure to follow. (One of those strange unwritten laws of nature, I guess). And using vise-grips to crimp a flexible feed line is one of them. Especially on this kind of day.

So now my only option is cutting off the main in a 16-family building!

NOW! Yes, I think NOW would be a good time to panic.

Voice 1: "Take it easy. It'll only be for a few minutes. Probably nobody'll even notice."

Voice 2: "I TOLD YOU! I TOLD YOU! I TOLD YOU! I TOLD YOU!"

As I went down the stairs toward the basement, I remembered something I'd read about "visualization." If one could get a clear, detailed picture in one's mind of exactly what you wanted and really concentrate on it, it would happen. I pictured bright red cut-off valves in

the basement. At least 16 of them. All with clearly marked tags hanging from them identifying which apartment they service. I concentrated really hard, putting everything else from my mind. so hard in fact, that when I reached the door to the basement and found it padlocked, I freaked out! Now what? I couldn't even get in the @%&*?/ basement!

Wait a minute. What was I thinking? I could so get in the basement. I was a Locksmith, wasn't I? Of course I could get in!

"You better have a code!" I silently warned the Master Padlock hanging from the hasp. "Because I've got my Dremel right here in my tool box."

The lock obviously knew I was in no mood to play games and presented me with a very clear code.

I hurried back to my shop, looked up the code, set up the depths, spaces, etc... cut the key, (almost) dropped the key on the floor, removed the Medeco cutter and replaced it with the correct one, cut a new key, which of course didn't work when I tried it in the lock. At least at first, but then it did. I was into the basement.

In the basement I found not the

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bright red valves of my "visualization" but old, dripping, corroded ones. Not that it mattered, because they ran across the tops of locked storage bins. Inaccessible.

"Thank God for that!" Voice 2 mumbled.

"Hey, I know you!" he declared when he reached the landing. "you're the locksmith, right?"

I walked to the front of the basement, where I knew the main should be, and spotted it immediately. (Which probably meant it had some sort of nasty surprise in store for me.) I found it very hard to turn, but finally I got it all the way off. I hurried back up the four flights, remembered I'd left the valve stem in the car, went down, got it, and on the way back up the stairs overheard, from within a couple of apartments, conversations that as you might have guessed had something to do with "water."

Believe it or not, I managed to switch the old stem for the new one with no problems. The minute it was

on tight I headed for the basement to turn the water on. But as I was going through the apartment door I heard a "WHOOSHING" sound. I turned to see water gushing full force out of the faucet. I grabbed the knob and replaced it on the stem. It fit easily. Much...too...easily. With a sinking feeling I realized it was stripped too. I was right back where I started. I was also tired and hungry and very depressed. Once again, "Plumbing" had defeated me. With my last bit of energy I used the channel-locks to turn off the faucet. And, with the water off, I could hear voices from the hall through the opened door.

"Yeah, it was the main. It was shut off! I don't get it, I mean I'm the only one with keys to the basement. I mean who the heck...?"

"I shut off the main." I confessed, calling down to a group gathered in the lobby.

One man, obviously the "Superintendent," separated himself from the others and started up the stairs, a puzzled look on his face.

"Hey, I know you!" he declared when he reached the landing. "You're the locksmith, right?"

I said I was and tried to explain

what happened.

"Aw, you should'a just rang my bell," he said kindly. "I'd of fixed it. Why didn't you?"

I just shook my head. Wondering why indeed it never occurred to me to just tell the "Super."

"I don't know," I answered honestly. "I really feel stupid for not thinking of calling you. But could you, would you fix it now?"


"Sure," he promised. "I'll be right back."

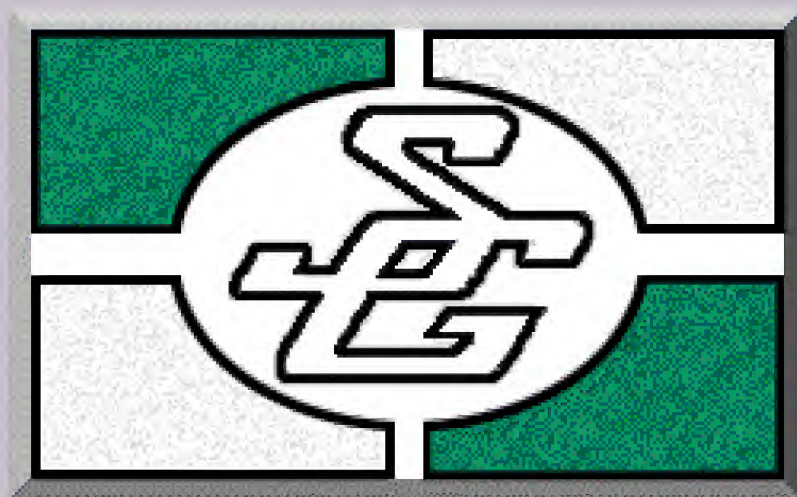
"Hey Josephine," he said teasingly a short time later, as we walked down the stairs together. "I got a stopped-up toilet on the first floor. You want to give it a shot?"

"No way! I swear I'll never touch plumbing again as long as I live! I sure am glad we, I mean you, got it fixed before she got back."

"Yeah, well that's my job," he replied, as I dropped the lady's keys in her mail-box.

"In fact," he added with a grin and a wink, "I really should'a fixed it yesterday when she told me about it."

The author is a locksmith and owner of Ginger's Locks & Keys in Glendale, New York. 



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Reed Report

Well, I'm settled in Florida now, and got the office running. Seems a lot of you out there want seminars this year and we're going to try and accommodate each and every one. We are open for the month of April through December, so let me know the dates you prefer and we'll do our best. If you are an individual wanting a particular seminar, contact your local association or call me direct. We will run all of the seminars through the associations, but every one will be able to attend. Call me at (904) 476-2799.

I have received several inquiries about which products have been "Reed Rated." These are products we tested in the field and found them to be top quality. I will be printing out a list of all of the products (over 100) and will be happy to mail them to you on request. Just send a self addressed, stamped envelope to: Reed Rated, P.O. Box 15532, Pensacola, FL 32514.

Steve and I will continue to rate security products, so if any manufacturers are interested, just give me a call. We have six people lined up to do our "in the field" testing.

One more thing on seminars. I would like to mention a few cities we are interested in to include on our schedule. If you education chairmen are interested, just give me a call. Buffalo, NY, Atlanta, GA, San Diego, CA, Minneapolis, MN, Fargo, NC, and in Canada at Vancouver, Toronto, and Winnipeg. What we would like to do is go to areas where few seminars go. Places like Margoville, KS?



Yours For Better Security,

Bill Reed
Bill Reed

Scatter Shooting while wondering whatever happened to . . . Doug Joosten?

As you read this column, I'm happy to report that Tech Train has its 1996 Quick Entry Car Opening Manual and video complete and ready to sell. Also, Hank Spicer has completed his Hankman #5 book and you can get that at Tech Train as well. The vehicles covered are:

- * Ford Mustang '95
- * Ford Taurus '96 (Pats ignition, eight cut)
- * Dodge Avenger '95
- * Hyundai Elantra ES '95
- * Hyundai Accent '96

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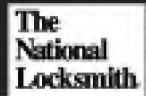
Midas Muffler is now installing after-market airbag systems on cars and trucks made from 1985 up. No service manuals are available and all services should be referred back to Midas. (Here we go again.)

Mercedes and BMW (1996) here introduced airbags in the doors. I recommend you don't put a tool down the door until we can get more info out to you. **RL**

If you'd like to attend a Bill Reed seminar, co-sponsored by The National Locksmith, choose from the following. For more info, contact Bill directly at (904) 476-2799.

April 13 Jacksonville, FL
April 21 Louisville, KY
May 4 Norfolk, VA
May 11 Dallas, TX
June 1 Colo. Sprs., CO
June 8 Baltimore, MD
June 22 Detroit, MI

July 6,7 Moses Lake, WA
Aug. 18 Okla. City, OK
Aug. 31 Salt Lake City, UT
Sept. 5 Philadelphia, PA
Sept. 15 Syracuse, NY
Oct. 30,31 .. San Diego, CA
Nov. 1,2 San Diego, CA



Dale walks us through the Sentry 1610 Electronic Safe servicing, opening, and changing combination procedures.



by
Dale W. Libby

LaGard has it, S&G has it, and now The Sentry Safe Company, also has it. What is it? An electronic safe lock. Granted, this five number combination electronic lock is low tech compared

to some of the more esoteric time delay functions, but to the customer of home fire safes, this unit represents a high tech safe with a push button keypad. It is a nice package.

I have seen these 1610 model safes sold at large office stores and discount houses. The safe comes in both the traditional dial and handle configuration and the new electronic version. The basic example of the electronic lock model is shown in photograph 1. On the standard model, the combination dial would take the place of the keypad.

The most difficult servicing procedure on this safe is changing the battery. Right under the key pad, there is a plastic door attached by two small Phillips screws. Once removed, a battery compartment is revealed with a 9 volt transistor type alkaline battery. This is clearly shown in photograph 2.

Sentry has been in the forefront in protecting the safe combination before the unit has been sold. On mechanical combination locks, there is a safety screw on the rear case of the door. This screw fits into a slot in the combination wheels which holds them in the open position. The prospective customer can open, close, and lock

Sentrys **NEW** 1610 Electronic Safe Lock

One of the most popular home safes there is, now offers electronic access for customer convenience.

door. Just remove the sheet metal screw, pull out the strip, and throw it away. The safe lock is not activated. In photograph 3, this can be seen. The strip fits under the locking tab on the bolt and over the end of the locking solenoid. This allows the tab to slide freely over the end of the solenoid bolt. As long as the tab is in place, the safe cannot be accidentally locked.

The keypad works easily with a light touch. After pressing each number, a green diode lights and a beep sounds. The beep sounds if either a correct or incorrect number is entered. The lock offers two access options; either enter the permanent factory code, or enter a newly created user code. Each combination code contains a total of 5 numbers.

The permanent factory code can never be changed. It has been recorded at the factory with the safe serial number which is located on the hinge side of the safe between the upper and lower hinges. It is located on a paper decal. This combination is not affected by battery failure or battery removal.

The second user code can be changed as often as you like, and is accomplished easily by programming with the factory code. No matter if both codes are set, the factory code will always open the safe. To open, just input the five number combination, the unit hums, then turn the handle clockwise (down) and pull the door open.

The lock also has a manipulation tamper resistant feature on it. If you enter the wrong combination, on the fifth number, the red error light will blink and three beeps will sound. The safe will stay locked. The combination can be tried twice more before an automatic timed lockout will

occur. This lockout window is two minutes long. Any attempt to input a combination will result in the error signal, but will NOT extend the 2 minute time-out.

Continued on page 114

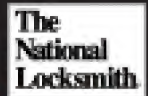
April 1996 • 111



1. The SENTRY 1610 fire safe with electronic lock.

the door without spinning the combination wheels and locking the combination inside the safe.

On the electronic model 1610, the lock is inactivated by a plastic strip or tab inserted on the back of the safe



Continued from page 111

Photosh 4, shows the inside of the door with the back panel removed. There are 4 spring loaded bolts and a solenoid located below the upper bolt bar. Two white wires come from the front of the unit through the wheel post for the mechanical lock. They are nicely held away from any moving parts of the lock by springs attached to the wires

There is also a stationary fence attached to the opening side (right) of the locking bolt. This means that the same exact bolts and door can be used on either the electronic or mechanical locking doors, a multi-functional modular construction for safe doors.

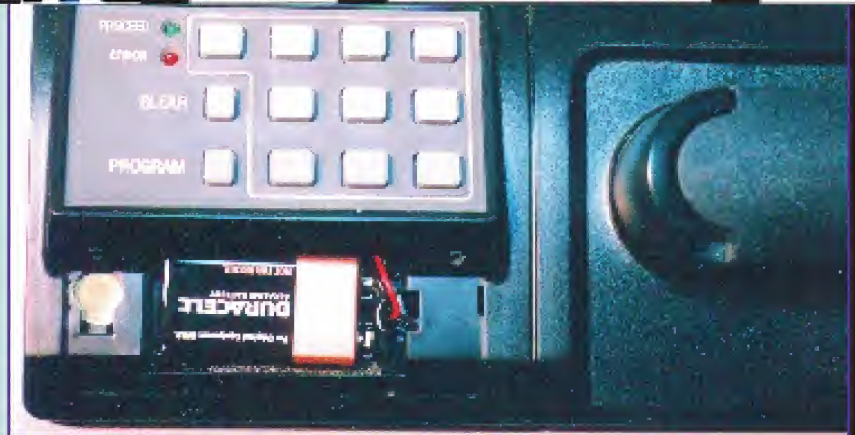
For those carry-out situations, this safe can be mounted to a floor. In the bottom of the safe are two dimples. These are for drilling two holes to mount the safe to the floor. The size of the holes will depend on the specific mounting screws or bolts.

Photographs 5 & 6 show the locking solenoid in the locked (photograph 5) or extended position, and the other (photograph 6) in the retracted or unlocked position. This safe is rather heavy, but I still tried to bounce the solenoid open. It was an unsuccessful attempt. If this safe is mounted to the floor, then

that fruitless procedure is thwarted.

So what do we as safe technicians do when faced with opening a locked 1610 Sentry unit. As professionals, we have to face Sentry, Mosler, Diebold, Major, Amsec, and Knight Safes, just to mention a few names. To the customer, a safe is a safe is a safe. A door knob is a doorknob, etc. ad nauseam. We have to attack the Sentry with as much professionalism as a Tann Vault door.

There are two professional procedures. The first is quite obvious. With any electronic safe lock, the first thing to do is to change the battery or



2. Cover below keypad has been removed to expose 9-volt alkaline battery.

batteries with new, fresh, strong cells of the right size. Alkaline batteries are suggested by all combination lock manufacturers. Do not just measure the old batteries. Change them with new ones.

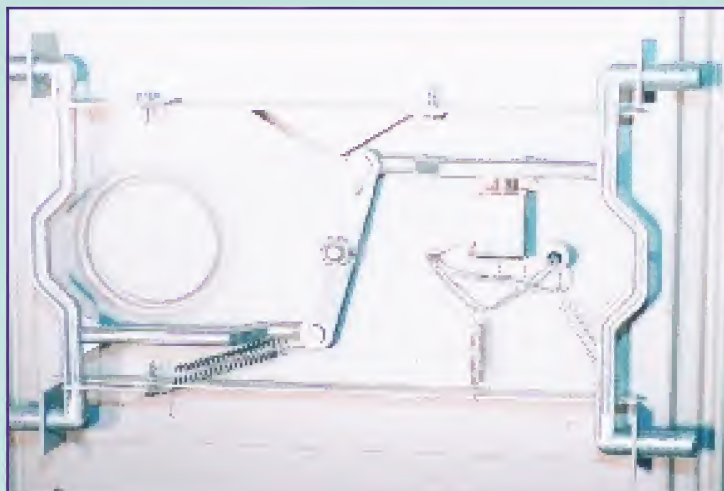
If the customer has lost the original combination, you can first call Sentry for the factory original combination by giving them the serial number off the tag on the safe. They might ask for your SAVTA or ALOA number. Just state that you are a locksmith and are opening the unit. Give them your National Locksmith number or your NSO number if they insist. Sentry has been quite good in this matter. Ask for customer assistance when calling.

Second, try the combination. If the keypad will not beep or except any combination, then it is time to drill, which is the second method of professional attack. The best drill point is 6 1/2 inches down from the top of the safe and 2 inches back from the face of the safe. This location is approximately even with the top of the keypad back 2 inches from the front of the door.

Drill a 1/4 inch hole at this location. Go through the outside and inside of the safe through the insulation. You will then reach the plastic back of the safe. Drill through this layer too.

At this point stick in a 5 inch piece of wire or long 5 inch thin screwdriver. Push down on the solenoid or hook the "E" clip and push down, then turn the handle to open. At this point the safe is cashed. If the electronics do not work or if the serial number is missing, I do not think it is possible to regain the original combination.

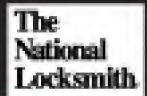
If the safe has been built in or anchored to the floor, then the drilling attack must be through the keypad. After prying off the plastic pad, locate



4. Bolt configuration and solenoid placement.



3. Safety strap goes under bolt blocking stud and over end of solenoid to keep open during shipment.



5. Solenoid in the locked position.
Wires come through wheel post inside door.

the two wires that go through the safe door through the spindle hole. There might be a possibility of "spiking" the lock open. Just put the 9 volt battery across the two wires. If the first attempt does not work, reverse the wires and try again.

If one of the wires had been pulled off or is shorted, then drill a 1/4 inch hole one inch right and 1-1/4 inch up from the spindle hole. This should



6. Solenoid in open or unlocked position.

place your hole at the end of the solenoid. (About the 1 o'clock position) Keep pressure on the handle when drilling and the safe should open itself. If not, reach in and pry the solenoid down. At this point, you might be able to order a new door direct from Sentry.

If you have any questions, you can call Sentry at 1-800-828-1438. The original serial number is also located on a decal in the original instruction booklet. Open and service electronic safes and Prosper!!!!



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I'm no Salesman (Woman)!

By: George Hall

The stereo typical perception of a salesperson may not be what you are or want to be, but you are a salesperson just the same.



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Salesperson: A pushy, obnoxious, individual who will tell you anything to get the sale and then deny everything after the sale. Wears loud clothes, gaudy rings and sucks on a toothpick. Has no product knowledge or technical ability.

I would imagine that you have experienced this type of person at one time or another and decided you could never be, or ever want to be a salesperson. Fine. When a fellow locksmith tells you about a way to save money, time, or effort, what is happening? You are being sold, that's what! He is a salesperson.

If you are on a job and believe that the customer is asking for the wrong product or service, would it be more like the "salesperson" in the definition if you informed the customer or not?

Let's put the shoe on the other foot. Would you appreciate it if your mechanic let you pay for a new brake job you didn't need, or let you put in only brake pads when the rotors were shot? If your wholesaler knew you were requesting a product that is illegal in certain applications, would you expect him to tell you? I would!

True sales has been defined as determining the customers needs and offering to meet those needs. It is going to



take a little more time to determine your customers needs, but, if you don't take the time now you will have a lot of time later when he doesn't come back.

Let's look at the first definition of sales: Determining and filling the customers needs. Suppose you are working in a retail lockshop. Mr. Jones, comes in and says "I need a padlock." At this point you can do several different things. You could grab the cheapest padlock you have and take his money. You could grab your favorite padlock and sell it to him. You could ask him a few questions, questions such as: What are you going to lock up with it? Will it be outdoors? Would it be convenient to have it keyed the same as the other locks you already have? Is this a need because of a previous lock being defeated?

Notice I did not ask "Do you want a pin tumbler padlock or what length shackle do you want?" Chances are the customer doesn't know because he doesn't understand locks. That is why he came to you!

This approach will work in any situation and if you have ever finished installing a new deadbolt only to hear the customer say "Is this a really good lock" you know it is worth asking questions BEFORE. You will sell more in most cases and consequently have a bigger profit. The more important reason is the customer will come back and also refer others to you as "My locksmith" who really knows locks!

Let's look at the other approach, being on the lookout for a need your product or service can fill. Some situations are very obvious. When a customer comes in to have keys cut and is carrying rental property keys in a coffee-can, it would be appropriate to ask "If there was a way for you to carry your keys in a less frustrating manner would you want to know about it?" If a customer tells you they want an additional car key because they were just locked out, it would be appropriate to ask "Would you be interesting in a way to prevent that from happening?" and suggest a Hide-a-Key or credit card key.

When you are called to rekey a lock, it would be an opportunity to offer some form of high security cylinder to provide key control in the future. Is it difficult to recommend a high security strike plate or a cylinder guard to improve a customers security? High pressure sales? Hardly, and most people will appreciate your offer even if they don't choose to buy it today. If you consider the possibility of a law suit, you will always want to give your customer options. What if you don't recommend a cylinder guard and his lock is attacked by a pair of pliers the next week?

There are situations which are not so obvious. How many doors do you walk through each day that have worn out or badly adjusted door closers or hinges? What if you had a price worked out ahead of time to cover the cost of a new closer installed or a pair and a half of hinges installed? The most common thing you will hear if you offer to meet this need is "I didn't know locksmiths did that." You won't sell something every time you ask, but you sure won't if they don't know you can solve the problem!

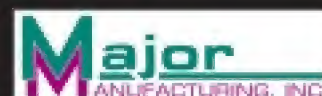
One thing is necessary before you can try this in your situation. You must become someone who really does know the product and its applications, so you can take advantage of the opportunity. If you seek to earn more, you must learn more about products and about methods of installing and repairing. You must give the customer the confidence to trust you so he won't go to the discount store and "get a padlock."

Besides improving your bottom line, the type of "sales" I have described here will help you and the whole industry by changing the definition of a locksmith as seen by the public. Just as the definition of the salesman above is not one to aspire to, the public's definition of a locksmith as a tinkerer or handyman or worse, as a rip-off artist who didn't meet their needs, is not one to aspire to. **TRU**



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KEY CODES

Metal Rousseau E3001-E5000

HPC 1200

Code Card - Not Available

Cutter - CW1011

Stop - Shoulder

Framon

Cut Start - .348"

Cutter - FC8445

Cut to cut - .156"

Spacing Block #1

Stop - Shoulder

Key Blanks

Silca - MTR1

Ilco - MR1

Spacing

1 - .348"

2 - .504"

3 - .660"

4 - .816"

5 - .972"

Depths

1 - .195"

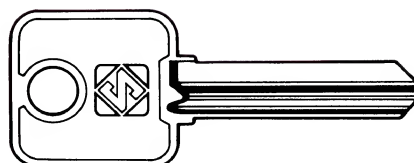
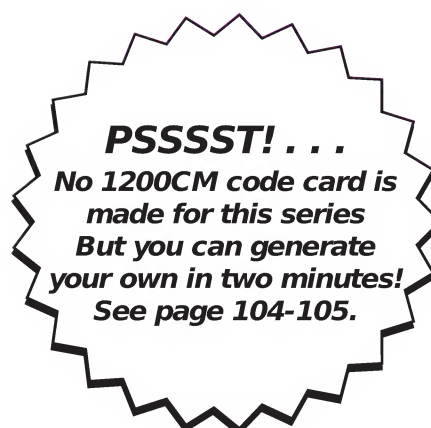
2 - .210"

3 - .225"

4 - .240"

5 - .255"

6 - .270"



PROFILE

E3001	42311	E3025	34655	E3049	14363	E3073	24246	E3097	22611	E3121	13234
E3002	41364	E3026	66141	E3050	36246	E3074	31636	E3098	45314	E3122	65534
E3003	32555	E3027	41414	E3051	54163	E3075	66662	E3099	54425	E3123	56465
E3004	46211	E3028	31565	E3052	14246	E3076	11363	E3100	54611	E3124	36631
E3005	55164	E3029	52241	E3053	33212	E3077	46536	E3101	33555	E3125	63534
E3006	35345	E3030	61124	E3054	44143	E3078	33462	E3102	54211	E3126	45365
E3007	64561	E3031	16335	E3055	35636	E3079	61663	E3103	51164	E3127	33341
E3008	45334	E3032	54141	E3056	41232	E3080	36336	E3104	45455	E3128	61314
E3009	25645	E3033	46314	E3057	35633	E3081	31642	E3105	55161	E3129	44465
E3010	43561	E3034	52145	E3058	53636	E3082	31363	E3106	43434	E3130	46631
E3011	33234	E3035	33441	E3059	46132	E3083	14636	E3107	13645	E3131	63514
E3012	25545	E3036	31314	E3060	42443	E3084	62152	E3108	15261	E3132	12335
E3013	15361	E3037	24435	E3061	12436	E3085	36463	E3109	61634	E3133	55141
E3014	36534	E3038	34141	E3062	65132	E3086	63536	E3110	46545	E3134	13414
E3015	34645	E3039	42124	E3063	36143	E3087	23352	E3111	66261	E3135	36335
E3016	65361	E3040	22314	E3064	26246	E3088	35563	E3112	35534	E3136	25241
E3017	14434	E3041	54635	E3065	32132	E3089	24636	E3113	41645	E3137	53614
E3018	13565	E3042	11145	E3066	32243	E3090	46336	E3114	62561	E3138	15635
E3019	36161	E3043	22663	E3067	65536	E3091	44352	E3115	16334	E3139	13145
E3020	31334	E3044	63246	E3068	15622	E3092	34114	E3116	33445	E3140	22441
E3021	16655	E3045	14152	E3069	15343	E3093	32525	E3117	55261	E3141	51514
E3022	15565	E3046	45663	E3070	65636	E3094	23321	E3118	41534	E3142	42636
E3023	41141	E3047	56336	E3071	46662	E3095	45614	E3119	44365	E3143	12452
E3024	51134	E3048	14452	E3072	66563	E3096	24135	E3120	53261	E3144	44363



Metal Rousseau E3001-E5000

E3145 54566	E3193 11124	E3241 43336	E3289 52544	E3337 61552	E3385 13615
E3146 24252	E3194 22235	E3242 52652	E3290 25225	E3338 53433	E3386 33131
E3147 61363	E3195 11221	E3243 66233	E3291 54621	E3339 55136	E3387 44634
E3148 55536	E3196 54614	E3244 26426	E3292 21544	E3340 54552	E3388 66315
E3149 15252	E3197 62525	E3245 15552	E3293 14225	E3341 36523	E3389 11621
E3150 25363	E3198 13121	E3246 16623	E3294 35421	E3342 32626	E3390 11144
E3151 61112	E3199 65414	E3247 54526	E3295 13444	E3343 66652	E3391 65225
E3152 21163	E3200 46525	E3248 14552	E3296 15125	E3344 22433	E3392 11421
E3153 16336	E3201 25511	E3249 12433	E3297 54421	E3345 15526	E3393 13544
E3154 55322	E3202 34425	E3250 51136	E3298 22544	E3346 45552	E3394 26125
E3155 51243	E3203 24214	E3251 65114	E3299 14255	E3347 64333	E3395 32131
E3156 14436	E3204 45221	E3252 55246	E3300 24421	E3348 63336	E3396 34544
E3157 23422	E3205 11235	E3253 66252	E3301 55314	E3349 46652	E3397 13415
E3158 12243	E3206 16514	E3254 24114	E3302 66511	E3350 51333	E3398 55321
E3159 61146	E3207 32321	E3255 16536	E3303 35625	E3351 14352	E3399 35524
E3160 16322	E3208 62325	E3256 26252	E3304 16314	E3352 46463	E3400 54455
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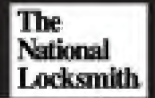
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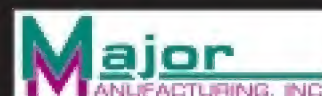
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Metal Rousseau

E3001-E5000

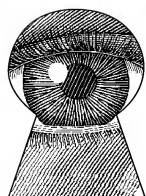
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Metal Rousseau E3001-E5000

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THRU THE KEYHOLE



A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS: Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Managing Editor, Greg Mango at (708) 837-2044.

American Alarm Supply

Utilizing the leadership of a senior management team experienced in the electronic security industry, combined with the resources of an established parent company, American Alarm Supply is committed to becoming the preferred supplier in the electronic security industry. By offering customers a comprehensive inventory, superior personal service, competitive pricing and technical support, American Alarm Supply brings a new dimension of service and customer response to the market.

The need for a full-service distributor of electronic security products became apparent with the increasing number of security professionals requesting personal service and technical support for electronic security systems and products. To fulfill this need, American Lock & Supply, a well-respected name in the door and security hardware industry for over 30 years, began researching the formulation of a new division dedicated solely to the electronic security market.

In January 1996, the new division, American Alarm Supply, formally opened with the goal of offering customers the opportunity to purchase a complete selection of products from one source. American Lock & Supply prides itself on maintaining the same corporate philosophies that have made American Lock & Supply so successful.

A cornerstone of American alarm Supply's foundation lies in its comprehensive inventory of alarm

equipment. By forming solid relationships with leading manufacturers, American Alarm Supply customers are assured of the latest, quality electronic security products. Additionally, American Alarm Supply believes customers should not have to spend valuable time searching for the products they need. Through a network of nationwide distribution centers, American Alarm Supply delivers the products customers need, when they need them. High fill rates and fast, accurate, same-day shipping provide American Alarm Supply customers the most sophisticated products and technologies, quickly and efficiently.

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business management seminars and industry educational programs, these hands-on workshops provide American Alarm Supply's customers with the resources necessary to expand their business as well as their profits.

By tapping into the tried and true philosophies that have made American Lock & Supply a respected industry leader for more than thirty years, American Alarm Supply is armed with the necessary business tools for success. And as the industry continues to evolve, American Alarm Supply is committed to offering tomorrow's sophisticated products and technologies to its valued customers today. For more information call 800-318-9147 **TNL**



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TEST DRIVE



Taking Industry Products for a Spin Around the Block

MECHANICAL PICK GUN

PRODUCT: Pistolpick HPG-10 by HPC. Some say the test of time, usefulness, practically and affordability, is the only true test of a products real worth. If this is true, the pick gun has passed the test. Its one of the simplest tools there is, yet one of the most effective. There are a lot of picking devices available on the market, but few that can surpass the usefulness, practically and affordability of a pick gun. The tool has been around so long many of us take it for granted, yet many have never used one or consider it a cheat tool. Call it what you like, it works.

PRODUCT DESCRIPTION: The Pistolpick can be used to pick pin tumbler as well as disc tumbler locks. All the parts of the Pistolpick including the main housing are nickel plated cold rolled steel to resist rusting and prolong performance. The tool comes complete with spare picks and a tension tool. An optional black leather holster (HPG-CASE) is also available.

OPERATION: The operation of the tool is quite simple. When the trigger of the pick gun is retracted, the pick blade retracts and snaps back in rapid succession. When the pick blade is inserted into a lock under the bottom pins however, the pick blades rapid succession, causes a kinetic reaction within the pin stack. The energy produced by the pick gun is transferred through the bottom pin into the top pin causing the top pin to jump, momentarily separating it from the bottom pin. This momentary separation results in an expanded shear line, making the lock considerably easier to pick open.

COMMENTS: There can be negative affects by using a pick gun however. The tremendous velocity invoked by the tool can cause the springs to

collapse if used excessively in the same cylinder. In a worse case scenario, a staked spring cover can literally be blown off, causing the pins and springs to follow. This is not a terrible situation, the lock can still be unlocked, its just that the lock will also need to be completely disassembled to reassemble the cylinder. On most pick guns a spring tension adjuster wheel is provided to set either a light or heavy tension. It is recommended that as light a tension possible should be used. This will also reduce the possibility of any negative affects from occurring. For locks with strong or heavy pin stack springs, the pick guns tension can be increased to defeat the increased resistance. As with any tool, a feel needs to be acquired for proper operation.

SUGGESTIONS: The only negative comment about the tool itself I can make is that the screw and nut used to secure the pick blade will continually loosen due to the excessive vibration it endures.

DESCRIPTION:
Pistolpick HPG-10 by HPC.

PRICE:
Dealer Price is about \$30.00.

COMMENTS:
It's well constructed, has all the features needed and it works.

TEST DRIVE RESULTS:
An excellent tool at an affordable price. That's an unbeatable combination.



A lock nut washer should be supplied, but even that won't stop the problem. I don't care how tight you lock the nut it will loosen up over time. To solve the problem, a dab of locktite needs to be used.

FEATURES: Special features to look for in a quality pick gun such as this one by HPC. are:

1. A spring tension adjuster.
2. Multiple pick blades.
3. One that can be completely disassembled to replace the inner spring actuator.

The inner spring actuator can break, and if the unit cannot be disassembled, the entire tool would need to be sent back to the manufacturer for repairs. Some pick guns are permanently sealed, while others are screwed together in halves. The latter is much better and a nice feature of the Pistolpick HPG-10.

CONCLUSION: Overall, the Pistolpick HPG-10, is one of the best - and least expensive - investments you will make. No matter what your skill level, a pick gun can be a good friend to have.

For more information contact HPC, Inc. at 847-671-6280 or your authorized HPC distributor. **RL**